Echelle Flexure Tests +JAN 25/26/93
Jan 29/30/93

CHSS Non Motion "Flexure" test setup (pin hole) Nov 6/7/92.

3.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 4.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				DAVID DUNLAP OBSERVATORY							
				74" LOGBOOK							
				VOL 72							
				PLATE NOS		CC10674 —			CC12717		
				NOV 92		MAR 93					

5

Emulsion Batches: .....

Date 1992 Nov. 6/7... Observers T.a.....Test (non Tel movement Flexure) .....Tel. West. side of Piers

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 10674 75	Comp/Stellar Hartman Tests			21 9 30		All at 00 00 ~~Sidereal Time~~	+45 12 18	FeNe H=1/8	10/10
10676	Comp.			19 46 20		00 00			10s
77	"			20 03		"	"	"	"
78	"			20 42 17		"	"	"	"
79	"			21 28		"	"	"	"
80	"			22 09 30		"	"	"	"
81	Using CCD.EXE Till this point			23 03 20		"	"	"	"
82	Now using CCD3.EXE			23 37 50		"	"	"	"
83	"			00 15 43		"	"	"	"
84	"			00 33 40		"	"	"	"
85	Comp			01 22 02		"	"	"	"

Spectr. Temp. ..... Dome Temp./Hum. +1.7°C 60% Transparency Conditions .. Cloudy ... Dome Closed ...

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. −005°C 62%H Topup finished @ 1910

CCDT set To −100° 40CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	~~T~~ Dome °C	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
			-	CASS CCD	1800 l/mm G=6020	200μ Pinhole	6563Å	1ci 2ci	Comp Stability Tests	No Tel movement no comp feed movement	
			+1.5°					3ci	575 0 35 1024 1 1 CCDFMT		
			+1.4°					4ci			
			+1.3°					5ci			
			+1.2°					6ci			
			+1.0°					7ci		no change in Y rel to 6ci	
			+0.6°					8ci		no change in Y CCDT = −99.6°C	
								9ci			
			+00.2					10ci		inner pixel # in Y down 4	
			00.0°					11ci		decreasing pixel # in Y	
			−00.3°					12ci			

7 pg#1 SAT SUN

Date ..Nov.7.1.8.-92..... Observers ..Fbr./.Tn..(Service)...

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ca10686	BIAS (4)								
687	Comp							FeAr Clear	60s
688	Nova Cyg 92	20 27 43	52 17 39	1824 52					718
689	Comp							FeAr Clear	60s
690	Nova Cyg 92	20 27 43	52 17 39	1840 55		01 27W			1490
691	Comp							FeAr Clear	60s
692	BIAS (4)								
693	Comp							FeAr Clear	60s
694	HD177724	19 00 49	+13 43	19 2008					240s
695	Comp							FeAr Clear	60s
696 700	FLATS x 5					0317W	+13 51	TUNG Ap=1/2	
701	Comp			1			Ap=1/2	FeAr ~~Clear~~	60s
702	HD177724	19 00 49	+13 43	19 4151					22s
703	Comp						Ap=1/2	FeAr ~~Clear~~	60s
704	Comp						Ap=Clear	FeAr	60s

Spectr. Ter
Focus....
Spectr. Ter
Exp. Mtr.
300
720
26K
37K

Spectr. Temp. ..... Dome Temp./Hum. -0.08/55.49 Transparency Conditions ... PARTLY CLOUDY 8

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCDT → -100C 90CGAIN
480 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=6020	250 μ with decker	λ=6563	1ci			
								3ci			
300	4"								Blk pgm		
								3ci			
720	poor	210						4ci		thinly cloudy - thickening	
								6ci		AIRMASS 1.4748	
								1ci		Dome T = -1.7°C	
								6ci			
26 K		v 2.99	A0 Vann					7ci	Telluric Std	7.4K ADU max	
								8ci			
								9ci		12.4K max ADU	
					1800 G=5930		6450Å	10ci			
32K		v 2.99						7ci	Telluric Std		
								11ci	Comps wk due to Ap=V2		
								12ci			

4 #2 SAT SUN

Date ..Nov. 7/8-92..... Observers ..Por/Th.(Service)..

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
705	HD203156	21 15 23	37 49	19 55 13		01 34			371
706	Comp							FeAr Clear	60s
707	Comp							"	"
708	HD198726	20 47 13	27 53						250
709	Comp							FeAr Clear	60s
710 712	FLATS x 3					00 01W	+20°	TUNG A=1/4	24s
713 714	Focus Test			21 20		"	"	FeAr clear	20/20

Spectr. Ten
Focus.....
Spectr. Ten

Exp. Mtr.
7000
380
Dom

Spectr. Temp. ..... Dome Temp./Hum. -2.0/57.5% (1954) Transparency Conditions ... PARTLY CLOUDY ... -> Solid Clouds Snow

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90 again CCD T = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7000		V 5.8 5.9	F2	CASS CCD	1800 a=5430	250 μ	λ=6450Å	13ci	[Rm].	Top Priority	
								14ci			
380	4"	V 5.75	GOIb					15ci	Rm pgm	Cloud & Snow seen	
								16ci.			
								17 18 ci 19			
								20ci.	470 0 10 1024 20 1 CCD Fmt for Focus		
Dome T = -1.4°C set				6.90				21ci		3 pixel Avg	
									Hll to Worm & Perseus		

11 Pg #1 sun mon

Date 1992 NOV 8/9 Observers Hdy Tn → 24" doing photometry of HD197433 [CSS386 10 secs ahead of WWV]

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC10715 716	Focus Comp / Stellar Hartmann			17 35		0 08W	+40 11		20/20
717	BIAS(A)			17 51		01 42W	+13 50	E of T side	
718	Comp							FeAr clear	60s
719	HD177724	19 00 49	+19 43	17 56 44					85s
720	"	"	"	17 59 50					154s
721	Comp							FeAr clear	60s
722 724	FLATS x3			18 08				TUNG Hp=1/2	8s
725	BIAS(4)								
726	FLAT							TUNG H=1/2	8s
727	Comp							FeAr clear	60s
728	HD197433	20 38 6	+75 14	18 24 37					406s
729	"			19 32 36					405s
730	"			19 39 56					400s
731	"			18 46 57					"
732	"			18 53 58					"
733	"			19 01 00		01 27W			"

Spectr. Temp. ..... Dome Temp./Hum. +00.7°C .63% H Transparency Conditions ... Fine - incr Haze ... 12

Focus .... 6.90 ..... THIS IS LOG BOOK 72

Spectr. Temp. ..... Dome Temp./Hum. -00.5°C .66%

Tel encoders NORMALIZED on α Cyg BS 7924

CCDT - -100° 90 CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=5530	250μ doctor	5880Å	20ci 21ci	470 0 10	FOR FOCUS TEST 1024 20 1 CCDFMT	
CCDT = -100.0°C (Just Reached that Temp)					[CCD Head warmed -5°C to Ambient during day]			1ci:	480 0 50	1024 4 1 CCDFMT Dome T = -00.1° C	
								3ci			
36K		2.99	A0V ann		NOTE: DEKKER LEAKS LIGHT			4ci	Telluric Std	MAX 7K ADU Trailed	
48K		"	"					5ci	"	6K max	
								6ci			
					RESULT:			7ci 8ci 9ci			
								1ci		Dome T = -00.1° C	
					EXTRA DUE TO LEAKAGE			10ci			
					SIMPLY IGNORE THE LEAKAGE			11ci			
2722	3-4"	7.3 - 7.7	G5V +K0V	+K5V				12ci	Hdy pgm	5000 ADU Σ Avg above Bkgrd SI Hazy	
2615	~3"							13ci			
3000								14ci		star 400s, bat x7	
3100											
3040											
3067											

B pg42 Sun Moon

Date 1942 Nov 8/9 Observers Hdy T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC10734	HD197433	20 38·6	+75 14	19 08 01		01 34W			40s
35				19 15 02					4
36				19 22 04					4
37	Bias(4)								
38	Comp			19 30 14				FeAr clear	60s
39	FLAT							TUNG A=V2	8sec
40	HD197433			19 34 00					40s
41				19 41 01		02 07W			
42				19 48 02		02 14W			
43				19 55 04					
44				20 02 05					
45				20 09 06					
46				20 16 51					
47				20 23 52					
48				20 30 53					
49	Bias(4)								

Spectr. Temp. ..... Dome Temp./Hum. -00.4°C 66% Transparency Conditions ... sl hazy ... 14.

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. -00.8°C 67% Tel All EAST side of Piers tonight.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3100	3"	V 7.3 -7.7		CHSS CCD	1800 l/mm	25μ	5880Å	14ci	Hdy pgm	1.1938 AIRMASS	
2960										Rechecked Field. Absolutely CERTAIN. Exp meter counts unusually high!	
3200								14ci			
								1cs			
	2							15ci			
								16ci		12.4K MAX ADU	
3000	2-3"							17ci	Hdy pgm	Repeat STHR400S. BAT 6	
2900											
3000											
2900											
2640											
2800								17ci			
2680	2"							18ci		Repeat x3	
2700											
3400								18ci			
								1ci		Dome T = -00.8°C	

15 pg 43

Date 1992 Nov 8/9 Observers Hdg ITn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc10750	Comp							FeAr Clear	60s	
10751	FLAT							Tung Hp=1/2	8sec	
52	HD197433	20 38·6	+75 14	20 42 55					400s	2000
53	"			20 49 56					"	2200
54	"			20 56 57					"	2300
55	"			21 03 58		03 30 30W			"	2360
56	"			21 10 59		~~03 30 30W~~			"	2360
57	"			21 18 01					"	2340
58	"			21 25 02					"	2360
59	"			21 32 03					"	2300
60	"			21 39 04					"	2370
61	BIAS(4)									
62	Comp							FeAr Clear	60s	
63	FLAT							Tung Hp 1/2	8s	
64	HD197433	20 38·6	+75 14	21 50 56		04 17W			400s	2390
65	"			21 57 57					"	2350

Spectr. Temp. ..... Dome Temp./Hum. -00.7°C 67% H Transparency Conditions ... s/ hazy ... fr

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. -01.6°C 69.5%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5530	250μ	5880Å	19ci			
								22ci		12 K MAX ADU	
≈ 2000								23ci	Hdy pgm	Repeat x 9	
2200	3-4									thin cloud coming	
2300											
2260										cloud generally missed me	
2360										AIR MASS = 1.282	
2340											
2060	3-4"										
2000	"										
2270								23ci			
								1ci		Dome T = -01.5°C	
								24ci			
								25ci			
2190								26ci	Hdy pgm	Repeat x 3	
2350											

17 pg #4 sun/moon

Date 1992 Nov 8/9 Observers Hdg TG

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc10766	HD197433	20 38.6	+75 14	22 04 58					400s
767				22 12 20					
68				22 19 21					
69									
70				22 33 23					
71				22: 40:40					
72				22 47 41					
73	Bias x4								
74	Comp							Fe Ar clear	60s
75	FLAT							TUNG A-1/2	8s
76	HD197433			22 59 35					400s
77				23 06 36					
78				23 13 38					
74				23 20 40					
80				23 27 41					

Spectr. Temp. ..... Dome Temp./Hum. -1.6°C 70% H Transparency Conditions ..5/ hazy ..... 18.

Focus ..6.90..... some cloud.

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2000					G 5530	250μ	5880Å	26c;	Hdg Pyr		
1800.	3"-4"									Repeat x 4	
1900											
2000.											
2060								26c;			
2000								27c;			
1950								27c;			
										-1.9° C Dome	
								28c;			
								29c;		MAX 11.8K ADU	
1800								30c;		Repeat x 9 ↓	
1700											
1700.											
1800											
1610											

A M #5 Sun/Mon

Date 1992 Nov 8/9 Observers Hdg. 24" Tn (Some Wki)

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC10781	HD 197433			23 34 42					40s
82				23 41 44					
83				23 48 45					
84				23 55 47		06 23W			
85	BIAS(4)								
86	Comp							FeAr Clear	60s
87	FLAT			00 03 50				Tung Hp=1/2	8s
88	HD197433	20 38.6	+75 14	00 07 24					40s
89	"			00 14 26					"
90	"			00 21 27					"
91	"			00 28 29					"
792	"			00 36 00					"
793	"			00 43 08					480s!
794	"			00 51 54					400s
795	"			00 58 55					"
10796	"			01 05 56					"

Spectr. Tem
Focus... 6
Spectr. Tem

Exp. Mtr.

1150
1450
1400
1347
1180
740
445
810
443
622
355
400
1790

Spectr. Temp. ..... Dome Temp./Hum. -25C 73% Transparency Conditions ... SI hazy 20

Focus ... 6:90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1550				CASS CCD		250u	5880Å				
1450											
1400	3"	7.3 - 7.7									
1347								30ci		thin cloud now	
								1ci		Dome T = -26C	
								31ci			
								32ci		11.5K ADU max	
1180								33ci		Repeat x4	
740											
445										cloud	
810										cloud	
443											
622											
855											
1400	3"									clear again	
1790								33ci			

21 #6 sun/moon

Date 1992. Nov. 8/9..... Observers ..Hdg./T.n.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC10797	BIHS(4)								
798	Comp							FeAr Clear	60s
799	FLAT							Tung Ap=1/2	8s
800	HD197433	20 38.6	+75 14	01 18 29		07 45W			400s
01				01 25 30					
02				01 32 37					
03				01 39 34					
04				01 46 57					
05				01 53 58					
06				02 00 59		~~08 35W~~			
07				02 08 01		~~"~~			
08				02 15 12		08 41W			40s
09	BIHS(4)								
10	Comp							FeAr Clear	60s
11	FLAT							Tung Ap=1/2	8s
12	HD197433			02 27 11					400

Spectr. Temp. ..... Dome Temp./Hum. -2.5°C 73% Transparency Conditions . PART. cloudy 22

Focus ... 6.90

Spectr. Temp. ..... Dome Temp./Hum. -2.7°C 74.1%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							5880Å				
								34c;			
								8i			
1600		7.3 - 7.7						10ci	Hdy pgm	AIRMASS 1.678 Repeat x 4	
1500	3"-4"										
1600											
1650								10ci			
1570								13ci		Repeat x 4	
1770										cloud again	
1560											
1350								13ci			
1400								2ci			
								1ci			
								16ci			
								17ci		MAX 10K ADU	
1190								22ci	Thick cloud @ 02 32		

23 #7

Date 1992 Nov. 8/9 Observers Hdy Jn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
CC10813	HD197433	20 38·6	+75 14	02 34 13		0901W			400s	1500
14	"			02 41 15						1040
15	"			02 49 03						180
16	"			02 56 04						340
17	"			03 03 06						460
18	"			03 11 54		0939W			400s	917
19	"			03 18 57					405s	500
10820	BIAS(4)									
821	COMP			03 27 31				FeAr Clear	60s	
822	FLAT							Tung A-1/2	8s	
823	Comp (WEAK)							FeAr A-1/2	60s	
824	Comp (USUAL)							FeAr Clear	60s	
825	HD87901	10 03 03	+12 27	03 40 26					120s	191
826	"			03 43 00					54s	82K
827	COMP							FeAr Clear	60s	
828 -830	FLATS x3							Tung A-1/2		

Spectr. Temp. ..... Dome Temp./Hum. -27°C ... 74% Transparency Conditions Cloud coming again 24

Focus 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1500	4"					250u Jacket	5880Å				
1040								27c;			
180								~~25c~~		Repeat 3 cloudy	
340											
460											
417								25c;			
500	4"-5"							26c;			
								1c;			
								27c;			
								28c;		9417 ADU MAX	
								30c;		DO NOT USE	
								~~31c;~~	Reversed		
25K		V 1.36	B7 V					32c;	Telluric	X = 1.68	
32K								33c;	?		
								34c;	?		
								35c;		9961 ADU MAX	

23 #8

Date 1992 Nov 8/9 Observers Hdx. In

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
10831	BIAS(4)								
cc 10832	BIAS(4)			04 13 47		0 0	+25°		
3	DARK			04 14 34					600s
4	DARK			04 24 46					600s
5	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. -21.5°C 75.7% Transparency Conditions ..... cloudy .....

Focus ... 6:90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					LASTED 10.5 hrs AT -100		17:30 EST TOP UP 4:00 EST WARMING			T_{CCD} = -98.6°C (WAS STARTING TO WARM UP)	
			After topup & CCDT back				to −100 °C			Dome T = -25°C	
600s								36c;			
600s								36c;		T_{CCD} = -100.3°C	
								1c;			
					All to Perseus & WORM						

27 wed Thurs

Date 1992 Nov 11/12 Observers Hdg. I.T.n

Emulsion Batches:

Flexure Tests For Hdy Tel East Side of Piers

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 10836 37	Focus Test	Comp / Stellar Horizon				0540W	+75°	FeAr Clear	20/20
38	BIAS(4)			2215					
39	FLAT					REVERSED			
10840	COMP			22 22 18		05 40 W	+75°	Tung A=1/2	25s
41						05 40			
42	COMPS					06 00			
43						06 20 W	+75°	FeAr Clear	120s
44						06 40			
45	COMPS					07 00			
46						07 20 W	+75°		11
47						07 40			
48				23 02 59		07 40 W			
49	No Tel movement at 0800W			23 27 10		07 40	+75°		11
50	FLAT			03 32 27		08 00 W			
51	BIAS(4)					08 00 W	+75°	Tung A 1/2	25s
52	Comp	No Tel movement		00 24 10		0800W	+75°	FeAr Clear	120s
53	"	" " "		01 35 11		"	"	"	"
54	"			01 42 39					
55	BIAS(4)								
56 57	Focus Test			01 51		0800W	+75°	FeAr Clear	20/20

Spectr. Temp. ..... Dome Temp./Hum. +5.1°C 75.8% Transparency Conditions .. Cloudy RING AROUND MOON

Focus .... 6.77 ..... Dome Closed FOR Tests

Spectr. Temp. ..... Dome Temp./Hum. +4.0°C 74.8% CCDT -> -100°C 90CGain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5530	250μ decker	5880Å	3c; 4ci	CCDFMT	470 0 10 1024 00 1 · Right On	
									CCDFMT	536 0 104 1024 1 1	
		28 pcol 430 438 xplot						5ci 6ci			
							JUMP 7ci 8ci 9ci		FLEXURE TEST	MOVING TELESCOPE SLOWLY BY HAND, DRIVE OFF	
							JUMP 10ci 11 12			Dome T @ 23 EST = +4.9°C	
								13ci 14ci 15ci			
								16ci 17ci		≃ 1 Pixel between 6ci and 15ci: x Shift image moves to lower pixel as time	
NOT SAVED, OVERWRITTEN BY cc10853.fts								17ci		Dome T +4.5°C @ 0020	
								18ci		Dome T = +4.1°C	
								19ci			
	T= +40 set 6.77 Still							3a. 4ci			

29 #1
P—

Date ..Nov.13/14-92..... Observers ..Hdy/.F.bc.....

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc108589	Focus Tests								
~~858~~ 860	Bias(4)								
861	Comp							Fe.Ar Clear	60s
862	Flat							Tung A=1/2	5s
863	HD177724	19 00 48	13 43	18 43 59					190s
864	—"—	—"—	—"—	18 48 09					216s
865	Comp							Fe.Ar Clear	60s
866	Flat	19 00 48	13 43					Tung A=1/2	5s
867	Flat							Tung A=1/2	4s
868	Comp							Fe.Ar Clear	60s
869	Bias(4)								
870	Dark(900s)								
871	Bias(4)								
872	~~Comp~~ Bias(4)							Flat Clear	60
873	~~Flat~~ Comp							Tung A=1/2	4s
874	Flat								

Spectr. Temp. ..... Dome Temp./Hum. 3.0°C/56.7% (1756) Transparency Conditions .. CLEAR / SLT HAZE 30

Focus ..... 6.77 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=6020	250 μ	>=6563			NORMALIZED ON BS7924	
60s											
5s											
190s	20K								TELLURIC	TRACKING GUIDING ON	
216s	22K								TELLURIC	GUIDING ON	
30s								3ci			
5s								4ci			
4s								4ci			
60s								3ci		VERY THICK CLOUD	
										T=1.5°C/H=63.1%(2018)	
60											
4s											

31 H-2

Date ...Nov 13/14-92.... Observers ...Hdg/Flor.....

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
875	HD 197433	20 38 36	75 14	20 25 54					400s	1090
876	"			20 32 48					400s	930
877	"			20 39 44					400s	935
878	FLAT							TUNG, D=1/2	4s	
879	COMP							FLAT COMP	60s	
880	BIAS (4)									
881	HD197433	20 38 36	75 14	20 54 57					400s	930
882	"			21 01 51					"	830
883	"			21 08 45					"	915
884	"			21 15 38					"	940
885	"			21 22 32					"	583
886	"			21 29 26					"	385
887	"			21 36 20					"	340
888	"			21 43 13					"	625
889	"			21 50 07					"	930

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Ptly. Cloudy ... 32

Focus ... 6.77 ...

Spectr. Temp. ..... Dome Temp./Hum. 536 026 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1090		7.23 7.68	G5P	CCSS CCD	1800 a=6020	250 μ	λ=6563Å		Hdy	Only Did 3 Exp's	
930		NOTE: HEADER INFORMATION ABOUT IMAGE SIZE IS WRONG								In Fear of Thick Cloud	
935					All edited		cc10876-95		Apr 30/96 TH	before CDRom ~~bum~~ archiving.	
930											
830											
915											
940											
583										More Thick Cloud	
385											
340											
625											
930										A little Clearer.	

33
#3

Date ...Nov.13/14-92.... Observers ...Hdg./For.....

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
890	BIAS(4)								
891	COMP							For Ion	
892	FLAT.								
	~~A0197433~~	~~203836~~	~~-75 14~~						
893	BIAS(4)								
894	DARK (900s)			222921					
895	BIAS(4)								

Spectr. Ten
Focus.....
Spectr. Ten
Exp. Mtr

Spectr. Temp. ..... Dome Temp./Hum. 0.06°C/63.7% Transparency Conditions ....PTLY. CLOUDY./SNOW
(2158)

Focus .....6.77.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CTSS CCD	1800 ω-6020	250 μ	λ-6563				
										SNOW!	
										LIGHTS ON	
										STOP OBSERVING	
										WORRIED ABOUT FLASH SNOW	
				All to Perseus and WORM							

35

Emulsion Batches:

Date Nov 14/15-92 Observers Hdy./F.D.R.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc10896	BIAS (WEST)									
897	BIAS (4) EAST									
898	COMP							FeAr Cen	60s	
899	FLAT							TUNG n = 1/2	4s	
900	HD197433	20 38 36	75 14	23 48 28					400s	900
901	"			23 55 22					"	950
902	"			00 02 15					"	000
903	"			00 09 08					"	900
904	"			00 16 01					"	930
905	"			00 22 55					"	020
906	"			00 29 49					"	660
907	"			00 36 42					"	565
908	"			00 43 36					"	635
909	FLAT							TUNG n = 1/2	4s	
910	COMP							FeAr Cen	60s	
911	BIAS (4)									

Spectr. Temp. ..... Dome Temp./Hum. −0.08°C/44.7% (2253) Transparency Conditions .... Clear − Patchy Cloud

Focus .... 6.77 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Normalized on BS800

90 again 536 0 26 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCSS CCD	1800 G=6020	250 μ	λ=6563			$T_{CCD} = -125°C$! ACCIDENTALLY	
										T=−1.3°C/H=68.6%	
900	3"-4"?	723-768	65V						Hdy		
950										Airmass=1.583	
1000											
900										BIT OF CLOUD	
920										CLOUD MOVING IN	
1020										FROM W & NW - SNOW?	
660										HUM > 69%	
1065											
635										CLOUD MOVING IN	
										$T_{CCD} = -126$!	

37 Pg#1 Wed - Thurs

Emulsion Batches: .....

Date . Nov. 18/19 - 97 ..... Observers ... Hdy. / Tn / Fbr. .....

.....

Time Clock Reset to WWV Time on P.C. - 55386

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc10912-3	FOCUS								
914	BIAS (4)								
915	COMP							FeAr Coarse	60s
916	HD177724	19 00 49	13 43	21 02 40					555s
917	COMP [redacted]	"	"					FeAr Coarse	60s
918	FLAT	"	"					TUNG A = 1/2	4s
919	FLAT	"	"					"	"
920	BIAS (4)								
921	COMP							FeAr Coarse	60s
922	FLAT							TUNG A = 1/2	4s
923	HD197433	20 38 36	75 14 00	21 28 23					400s
924	" COMP	"	"					FeAr Coarse	60s
925	TUNG							TUNG A = 1/2	
926	BIAS (4)								
927	HD197433	20 38 36	75 14	21 43 20					400s

Spectr. Temp. ..... Dome Temp./Hum. -1°C ..... 70% Transparency Conditions . PART Cloudy 38

Focus ....6.77.....

Spectr. Temp. ..... Dome Temp./Hum. ..... CCD T=-100°C 536 026 1024 41.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 a=6020	250 μ	λ=6563				
4500									TELLURIC	VERY BAD SEEING In The Trees (Low)	
" "											
0585		7.23 7.68	G5 V						HOY	HEAVY THICK CLOUD	
										Dome T = -20°C	
685		7.23 7.68	G5 V					1Ci	Hdy.		

39 pg #2

Date 1992 Nov 18/19 Observers Hdg./~~Fbs~~./Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
CC10928	HD197433	20 38.6	+75 14	21 51 13					40s	950
29	"			22 58 07					"	900
30	"			23 05 01					"	890
31	Comp							Fedr Glass	60s	
32	Flat							Tung. A=½	45	
33	Bias(4)									
34	HD197433	20 38.6	75 14	22 17 36					40s	1000
35	"			22 24 30					"	975
36	"			22 31 24		05 37W			"	940
37	"			22 38 17					"	840
38	"			22 45 11					"	840
39	"			22 52 53					"	800
40	"			22 59 47					"	980
41	"			23 06 40					"	970
42	"			23 13 34					"	970
43	BIAS(4)									

Spectr. Temp. ..... Dome Temp./Hum. -1.9°C 70% Transparency Conditions .. P.C.T. Cloudy - Hazy 40

Focus .. 6.77 .....

Spectr. Temp. ..... Dome Temp./Hum. -2.6°C 71.5% 5360261024 4 1

CLAMBDA 90CGAin CCDT → -100°

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
860	6"	V 7.3 -7.7		CASS CCD	1800 l/mm G=6020	250μ darker	6563Å	7ci	Hdy pym	Repeat x3	
800											
890											
1000								11ci	Hdy pym	Repeat x5	
975	5"										
940											
840											
840											
1000										Repeat STA 9002 x4	
980											
990											
970											

4" pg 43 wed Thurs → Some 24" photometry of same

Date 1992 Nov 18/19 Observers Hdg./Fbr./Tm

Emulsion Batches:
STAR
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC10944	Comp							Feat Clear	60s
45	FLAT							Tung A=1/2	4se
46	HD197433	20 38·6	+75 14	232828		0632W			434
47	"			233654					400s
48	"			234350					1
49	"			235048		0650W			1
50	"			235747					1
51	"			000546					
52	"			001245					1
53	"			001944					1
CC10954	Bias (4)								
55	Comp							Feat Clear	60s
56	Flat							Tung A=1/2	4s
57	HD197433			003225					400s
58				003923					1
59				004622					1

Spectr. Temp. ..... Dome Temp./Hum. -2.8°C 71.8% Transparency Conditions Hazy 42

Focus 6.77

Spectr. Temp. ..... Dome Temp./Hum. 536 0 26 1024 4 1

Comparison Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					CAS CCD	1200 l/mm G=6020	25μ dekar	6563	12ci			
									13ci		MAX 12.4k ADU	
	1080								14ci	Hdy pgm		
	1000								15ci		Repat x 4	
	950										1.564 Airmass	
	1000											
	1010								15ci			
	930								16ci		Repat x 3	
	960	4"										
	875								16ci			
											Dewar T = -30°C	
	822										Repeat x 5	
	Sum of 7											
	1670											

43 PJH4

Emulsion Batches:

Date 1992. Nov. 18/19..... Observers . Hdg. 24"/. T.o.l. Fbr....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
CC10960	HD197433	20 38.6	+75 14	00 53 21		07 59W			400s	940
61				01 00 19					"	960
62				01 10 03					"	970
63				01 17 02					"	975
64				01 24 01					"	975
65				01 30 59					"	970
66	BIAS(4)									
67	Comp							Refr Len	60s	
68	Flat							Tungsten	4s	
69	HD197433	20 38.6	75 14	01 42 06					400s	930
70	"			01 49 05					"	930
71	"			01 56 03					"	950
72	"			02 03 02					"	940
73	"			02 10 00					"	940
74	"			02 16 59					"	940
75	"			02 23 58						1030

Spectr. Temp. ..... Dome Temp./Hum. -3.2°C ....72.3% Transparency Conditions ...SI...hz.....4.4

Focus ...6.77.....

Spectr. Temp. ..... Dome Temp./Hum. 536 0 26 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
890	4"					20u	6563A	19ci	Hdy Pgm		
900								19ci			
940								19ci		Repeat 4 [Hα looks dbl now]	
975											
975											
910								19ci			
								~~20~~		Dome T = -3.3°C H=74%	
								20ci			
								21ci			
930								22ci	Hdy	T = -3.7°C, Hum = 74.7%	
990											
950											
940											
940											
910											
1000											

42 pg #5

Emulsion Batches:

Date 92 - Nov. 18/19 Observers Hdy (24") / Tn / Fbr

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc10976	HD197433	20 38.6	75 14	02 33 57					400s	1000
77	"			02 37 55		09 43W			"	750
78	BIAS (4)								"	
79	Comp							Feder Clear	60s	
80	FLAT							Tung A=1/2	4 sec	
81	HD197433	20 38.6	+75 14	02 49 40					400s	1050
82				02 56 39						965
83				03 03 37						
84				03 10 36						1600 →
85				03 17 54		10 24W				675
86				03 24 53						
87				03 31 51						450
88				03 38 50						375
89				03 45 49						330
90	BIAS (4)									
	→									

Spectr. Temp. ..... Dome Temp./Hum. -4.1°C 75.0%H Transparency Conditions ....Some Cloud.....

Focus ... 6.77 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 536 0 26 1024 4 1 ccd fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000		7.3 -7.7	G5V +K7V	CASS CCD	1800 a-6020	150 μ	λ:6563	22c;	Hdy		
980	4"							22c;		1.908 AIRMASS	
								23c;			
								24c;		MAX 12.4K ADU/pixel	
1050								25c;			
965											
1600 →	Σ OF 2									T=-4.5°C / Hum: 75.6%	
675											
~~1950~~										LIGHT CLOUD	
450										HUM: 76.3%	
375										THICKER CLOUD NOW	
380											

47 pg #6

Date 92 - Nov 18/19 Observers Hdy (24") / Tn / Fbr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc10991	FLAT								
992	COMP								
[redacted]									
993	COMP							Fe/Ar Cu	60s
994	H087901	10 03 03	12 27 22	04 12 50		9 42 W			83s
995	"	"	"	04 14 56					89s
[redacted]									
996	COMP							Fe/Ar Cu	60s
997-999	FLAT x 3							TUNG n = 1/2	4s
CC11000	BIAS (4)								
CC11001	DARK					0 0			600s
1002	BIAS (4)					"			

Spectr. Ter
Focus....
Spectr. Ter
Exp Mtr
30 K
38 K

Spectr. Temp. ..... Dome Temp./Hum. -4.4°C / 75.7% Transparency Conditions ..... CLOUDY ..... 48.

Focus ..... 6.77 ..... b

Spectr. Temp. ..... Dome Temp./Hum. -4.3°C 77% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CRSS CCD	1800 u-6020	250 μ	λ=6563				
								~~4c:~~			
								27c:	TELLURIC		
										A LITTLE SNOW . . .	
30 K											
38 K											
								29c:			
								30			
								31 32			
								33c:			
								1Ci			

49 pg #1

Date 9.2.-Nov.1920.... Observers ..Hdy(24")/Tn/Fbr..

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11003 004	Focus Test	Comp/Stellar Hartmann			17 25	00 00			
005	BIAS(4)								
006	Comp							Fc. Ar Cu	60s
007	HD213998	22 30 13	-0 37 59	17 45 57					354s
008	"	"	"	17 52 57					281
009	Comp							Fc. Ar CCu	60s
010-012	Flat x3	22 30 13	-0 37 59					Tuna n=1/4	25s
013	Comp							Fe Ar Cu	60s
014	Bias (4)								
015	Flat							Tuna n=1/4	20s
016	HD197433	20 38 36	-75 14	18 24 28		1 34 W			4:1s
17	"	"	"	18 31 28					401
18	"	"	"	18 38 52					400s
19	"	"	"	18 45 50					"
20	"	"	"	18 52 49					"
21	"	"	"	18 59 48					

Spectr. Temp. ..... Dome Temp./Hum. 0°C 73% Transparency Conditions ... Fine .....

Focus ... 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CLAIMBDA Deneb is Tel Normalization STAR

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G-5530	2 Pix Medium	5880	3ci 4ci		CCD FMT for Focus 470 0 10 1024 20 1	
								kci		(Stellar UV SI Ref OK) 536 0 26 1024 4 1 CCD FMT	
60s											
35s	31K		V 402	B&LIV				6ci	TELLURIC		
28s	26K							7ci			
60s											
25s								9ci 10ci 11ci		13K MAX ADU	
60s											
20s											
45s	1955	3+	V 2.23 2.68	G5V				13ci	Hdy	4700 ADU Σ Avg 7 cds	
40s	1907							15ci		getting hazy	
400s	1800									Fully Cloudy	
"	990									THICK CLOUD MOVING IN!	
"	1700										
	1700										

sl pg #2

Date 92 - Nov 19/20 Observers Hdy./Tn./Fbr.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Exp. Mtr.
cc11022	Bias(4)									
23	Comp							Fe/Ar Clear	60s	
24	Flat							Tung n=1/4	20s	
25	HD197433	20 38.6	+75 14	19 11 52					400s	1310
26	"			19 18 51						870
27	"			19 25 50						353
28	Bias									
29	Comp					02 40W	+75°	Fe/Ar Clear	60s	
30	FLAT							Tung A=1/4	20s	
31	DARK			1940					600s	
32	BIAS(4)			202026						
33	Comp	Tel East Side		2009		-9 19 35	+62°	Fe/Ar Clear	120s	
34	"			205508		"	"		"	
35	"			212947		"	"			
36	BIAS(4)									

Spectr. Temp. ..... Dome Temp./Hum. -1.6°C 75% Transparency Conditions ..... Clouds S2

Focus ..... 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. -1.3°C 78%

THIN → Thick Clouds

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 a=5530	350 μ	λ=7880				
								16c i			
1310									Hdy	Thin Clouds	
870				WRONG NAME IN HEADER							
353											
								1c i			
								17c i			
								18c i			
								19c i		Done T = -1.4°C	
								1c i		[536 c 104 1c/A 1 1]	
NOTE: DONE OUT OF ORDER				WRONG IMAGE SIZE IN HEADER NY = 104 ACTUALLY				20c i	Slit Rotation test	1 1 Bin in Y	
				HEADER OK NY=102				21c i	Also, the Telluration comp stability tests		
								22c i		(-1.3°C)	
								1c i			

53 pg 43

Date 1992 NOV 19/20 ... Observers (Hdq 24") ... Fbr ... Two ...

Emulsion Batches: .....

.....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11037	Comp			21 43 17				FeA Clear	60s
38	FLAT							THNG Ap=1/4	20s
39	HD197433	20 38·6	+75 14	21 48 57					400s
40	FLAT							THNG Ap=1/4	20s
41	Comp							FeA clear	60s
42	DARK			22 07 17					600s
43	Bias(4)			22 17 27					
44	BIAS(4)	[Now Tel on West Side]		00 58 54		0 0	+35°		
45	DARK	10 mins		00 59 47		"	"		600s
46	BIAS(4)					"	"		
47	DARK	10 mins				"	"		600s
48	BIAS(4)					"	"		
~~7c (A B C D)~~	~~FLAT~~			~~23 02~~		~~00 KW~~	~~+44 50°~~		
	~~BIAS~~								

Spectr. Tem
Focus ... 6
Spectr. Tem
Exp Mtr.
1260

Spectr. Temp. ..... Dome Temp./Hum. -1.9°C 78.1% Transparency Conditions .. PLAT. clear 54

Focus ... 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. -1.5°C 79% To mostly cloudy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5530	250u	5880Å	23c			
								24c			
1260	4"	✓ 7.3 7.7						25c	Hdy pgm	cloud at end	
								26c			
								27c			
								28c			
								1c			
								1c		DOME T = -1.4°C	
								31c			
										Dome T = -1.4°C	
								32c			
				~~(no dekker, 250u slit head)~~ Below				1c		Dome T = -1.4°C	
~~47×47~~				~~(6 Exps×2)(12 Dums×2)~~							

~~56~~ Fri - SAT

Emulsion Batches: .....

Date 1992 Nov. 20/21... Observers ...T.H.....No one else here at All .....

Comp STABILITY Tests. OR Non movement "Flexure" Tests.....Tel. West Side

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11049									
50	Focus	Comp/Stellar	Hartman	18 42				FeNo A_p=V8	10/10
51	comp			19 07 36			Actual		
~~52~~	comp			19 48 03		00 00 37W	+45 20'	FeNo A_p=V8	10 sec
53	"			20 26 19					
54				21 41 25					
55				21 50 36					
56	"			22 23 02					
57				22 45 38					
58	"			23 28 10					
59	BIAS(4)			23 31 18					
60	Comp			00 01 08					
61	"			01 03 19					
62	"			01 28 09					
63									
64	Focus Test	Comp/Stellar		02 03				FeNo A_p V8	10/10
1:									
~~65~~									

~~Spectr~~ Dome Temp. +1.5°C @ 1820. Dome Temp./Hum. ..... 87.6% Transparency Conditions Cloudy 5.6

Focus ... 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. 88.5% 90 C6/Hin

Temp outside stable or sl Rising [580 6 20 1024 1 1 CCDFOUT] in Time.

CCD T -> -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Note Great Care				CHSS CCD	1800 l/mm G=5530	200u pinhole	5880Å	3c: 4c:		Dome T = 1.6°C Stellar UV sl Red	
Taken not to Touch Telescop								5c: 6c:		+1.6°C 87.6%H	
No Generator, no Topups								10c:			
no Dome Turning etc.								11c:		+1.7°C	
no Door Slamming etc								12.		CCDT -100.5°C	
								13		+1.7°C CCDT -100.5°C	
Note that Dome Temp is slightly								14		+1.7°C	
Rising if anything as								15		+1.7°C CCDT = -100.5°C	
night progresses								1c:		Dome T = +1.8°C	
								16c:			
								17c:		Dome T = +1.9°C	
								19c:		T = +1.9°C CCDT = -101.3°C	
								20c:	Topup done Prob caused	after 20c finish at 0150 EST further Y shift up slightly	
								23		(Exactly matches 1st Focus Test)	
								24		Stellar still UV sl Red	
								25			
								26			

57 Mon-Tues

Date 1992 Nov 23/24 .... Observers ... T.H. .....

Emulsion Batches: .....

(TC/ on west side of Piers for Tests) Comp / Temp Stability Tests ... etc. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11065									
66	Focus Test			20 03		00 00 41	+45 11	Felke A=1/8	10/10
68	Comp			20 07 22		"	"	"	10
67	BIAS(4)			20 13 14					
69	Comp			21 02 27					
70	Comp			22 16 48					
71	Comp			23 54 59					
72	Comp			00 56 50					
73	Comp?			02 57 42					
74	Comp?			02 06 02					
75	BIAS(4)			02 13 32					
76	FLAT			02 17 53				TUNG A=1/4	20s
	1992 Nov 26/27 Th Thurs/Fri								
CC11077	FLAT for Hdy			19 38		0 0	+40°	TUNG A=1/4	10s
78	BIAS(4)								
79	Comp			19 42 35				Fe Ar [/ neg	60s

Spectr. Temp. ..... Dome Temp./Hum. +3.5°C ... 86%H Transparency Conditions Cloudy .....

Focus 6.80 ..... Tel not moved OR Touched.

Spectr. Temp. ..... Dome Temp./Hum. .....

580 0 20 1024 8 1 CCDFWT

568 - 575 xplot Stellar vw SI Ref

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	CCDT Remarks 100%	Quality
				C4SS CCD	1800 l/mm G=5990	200u Pinhole	6563Å	25 26	Righton OR	T=+3.5°-3.6°C	
								27i:		T=+3.6°C	
								28i:		T=+3.5°C	
								29i:		T=+3.5°C T=+3.2°C	
								30i:		T=+3.1°C	
								31i:		+2.8°C	
								32i:		+2.6°C	
								33i:		+2.5°C	
								1i:		Done T=+2.5°C	
Then Topup Started								34		MAX 7706 ADU	
Right After Topup Focus 6.80				C4SS CCD	1800 l/mm G=6020	95u no decker	6563Å	36i:	A80 0 50 1024 4 1 CCDFWT Hdy Test [To Look FOR CCD window Flares]		
								1i:	Done T=	+6.4°C H=71.6%	
								3i:		CCD T=-102.3°C	
							Docked up to here				

59 pgs #1 Sun/Mon

Date 1992 Nov 29/30 Observers Hdy / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11080 81	Focus Test	Comp/Stellar Hunter		18 33					
82	BIAS(4)								
11083	FLAT			18 50 15				Tung Clear	13s
84	"			18 54 40				A=1/2 Tung	39s
85	"			18 57 05				Tung A=1/4	160s
86	BIAS(4)								
87	DARK			19 05 28					900s
88	BIAS 4								
89	DARK			19 22 00					900s
11090	BIAS4								
11091	BIAS(1)			20 41 34					
11092 -11103	BIAS(1)								
11104	BIAS(4)			22 39 20					
FM00473 AC BD	BS 941	03 08 59	+44 49 46 (1992.5)	23 02		00 16 W	+45 50		"N" mode
11105	BIAS(4) -							KO III sp	
11106	Comp -			23 24				FeAr Clear	60s
11107	FLAT -			23 27				Tung It=1/2	10s

Spectr. Temp. ..... Dome Temp./Hum. +23°C ..H 67% Transparency Conditions ... Cloudy ..... 60.

Focus ... 6.83 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800l/mm no decker	250u	5880Å	1 c; 0 c;	Focus -	CCD FMT station 360 0 12 1024 90 1 UNSIRed	
					G-5530	"	"	1c;		510 0 160 1024 1 1 CCD Fmt	
								5c;		12988 ADU MAX	
								6c;		13137	
								7c;		HOT PIXEL SATURATED	
										Dome T = +2.2°	
								3c;			
								3c;			
								3c;		536 0 26 1024 4 1 ccd fmt	
										VARIOUS FORMATS	
Tel Normalized on BS 941. Then frames taken								1c;		+1.7°C Dome T	
47x47 pixels [2x 67ms + 2x 133ms Int] 250u no decker Below Slit									Semi Seeing test (1st use of new FBaore Grab)		
MAGV = 3.80 [FANS not on, As should be The case]								1c;	Dome T =	+0.7°C Open again	
								3c;			
								4c;		12K MAX	

61 pg#2 sun mon

Note CSS 386 Instr PC ahead 8 secs of WWV TIME

Emulsion Batches: .....

Date 1992 Nov 29/30... Observers Hdg - 24" / Tn / Imki .....

Tel East Side obviously .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11108	HD197433	20 38.6	+75 14	23 30 38		T 19 W			400
09				23 37 37					400s
10				23 45 04					400s
cc11111.fts				23 51 59					
12				23 58 56					
13				00 06 16					
14				00 13 13					
15				00 20 10					
16				00 27 06					
17	BIAS(4)								
18	FLAT			00 35 11				TUNG A=1/2	10s
19	Comp							Fe Ar Clear	60s
20	BIAS(4)								
21	DARK			00 45 07					600s
22	DARK								600s
23	BIAS(4)								
24	BIAS(4) TOP UP ...								

Spectr. Te
Focus ...
Spectr. Te

Exp Mtr.
405
950
850
835
877
860
316
162
149

Spectr. Temp. ..... Dome Temp./Hum. +00.7°C 72% Transparency Conditions ... hazy 62

Focus ... 6.83 .....

Spectr. Temp. ..... Dome Temp./Hum. +00.5°C 75% 536 0 26 1024 4 1 CCDAMT

90C GAIN CCDT → -100C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
905	3"	7.3 -7.7		CASS CCD	1800 l/mm (65530) Full	250μ clocked	5880	5ci	Hdy pgm	Δ RA -00 00 54 Dec +00 00 24	ADU 1500 Σ Avg of 5 cols + bias BKgnd
900								6ci			
850								7ci		Repeat STAR 400s; BAT x3	
835											
877											
860								8ci		Repeat STD 400s; BAT 4	
366										Variable clouds!	
162										Cloudy.	
149								8ci			
								1ci			
								9ci			
								10ci			
								11 11ci			
							Δ/l to	worms	Persons		

63 Pg #3 sun/mon

Date 1992 Nov 29/30 Observers Hdy Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 11125	BIAS(4) BREAK BIAS								
11126	BIAS(4) BREAK BIAS								
27	Comp							FeAr clear	60sec
28	FLAT			02 03 52				Tung A=1/2	
29	HD197433	20 38.6	+75 14	02 06 16					400s
30				02 13 13					
31				20 10					
32				27 07					
33	" edit object			34 17					
34	" "			41 14					
35	" "			48 11					
36	" "			55 09					
37	" "			03 02 05		1052W			
38	BIAS(4)								
39	FLAT							Tung Ap=1/2	13
40	comp							FeAr clear	60

Spectr. Te
Focus ..6
Spectr. Te

Exp Mtr
536
645
745
820
824
853
1738
785

Spectr. Temp. ..... Dome Temp./Hum. +00.6C 75.8% Transparency Conditions ..PART cloudy.....64.

Focus ..6:.8.3.....

Spectr. Temp. ..... Dome Temp./Hum. +00.2C 78.0% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5530	250u decker	5460Å			WIERD STRUCTURE NEAR HOT PIXEL, NOT IN LAST BIAS(1) WHICH WAS AVERAGED HERE	
										MAX	
536	4"	V 7.3 -7.7						14ci	Hdy pgm	Repeat×4	
645											
745											
820											
824								15ci		Airmass = 2.00	
853											
1738											
785											
								16		11.4 K MAX 40%	
								17			

65 proj #4

Date .Nov. 29/30..... Observers .Holy...Tu.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Tem / Focus...6 / Spectr. Ten — Exp Mtr
CCIII41	HD197433	20 38.6	+75 14	03 13.09					400s	714
42				03 20.06					400s	770
43				03 27.04					4	550
44				03 34.01					9	330
45	Comp			34.27				FeAr Clamp	60sec	
46	FLAT							Tung A=1/2	.	
47	~~Comp~~ BIAS(4)									
48	Comp							FeAr Clamp	60sec	
49	HD87901	10 03.03	+12 27	03 50.36					562 sec	14800
50 51	FLATS x2							Tung A=1/2	10sec	
52	HD87901			04 06.46					106sec	2000
53	Comp			04 14				FeAr Clamp	60s	
11154	BIAS(4)									

Spectr. Temp. ..... Dome Temp./Hum. +00.2C ... 78% Transparency Conditions . Hazy ... 66

Focus ... 6.83 .....

Spectr. Temp. ..... Dome Temp./Hum. 78

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
714								18ci	Hdy pgm	Repeat x4	
720											
550	4"										
330											
								19ci			
								20ci			
								21ci			
14800								22ci	Telluric Std,	dual H and 1229	
								23ci			
27000								24ci		1.26 AIRMASS	
								25ci			
						All now backed up too,					

67

Date DEC 1/2, 1992 Observers Hdy/Tn

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11155	BIAS(4)			19 55 00					
56	DARK								20s
57	BIAS(4)								
58	DARK								40s
59	BIAS(4)								
60	DARK								60s
61	BIAS(4)								
62	DARK								120s
63	BIAS(4)								
64	DARK								240s
65	BIAS(4)								
66	DARK			20 11 03					480s
67	BIAS(4)								
68	DARK			20 20 12					900s
69	BIAS(4)								
70	DARK								1800s
71	BIAS(4)								
72	DARK								3600s
73	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions OVERCAST 68

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											TOPUP FINISHED 19:30 LIGHTS OUT	
20s												
40s												
60s									3ci			
120s									4ci		3 COSMIC RAYS	
240s									5ci		1 STRONG COSMIC RAY	
480s									6ci		4 COSMIC RAYS	
900s									7ci		$T_{CCD} = -101.95$ °C 15 COSMIC RAYS	
1800s									8ci		13 COSMIC RAYS	
3600s									9ci		32 COSMIC RAYS	

64p1

Date Dec. 5/6 - 93 Observers Hdy. (24") / F.D.r. / Mki

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
sc11745	Focus Test								
11176	Bias (4)								
11177	Flat.							TUNG A=1/2	8s
78	Comp							FcAr Clear	60s
79	Bias (4)								
80	Flat								
81	HD 24504	03 48 46	47 34 40	22 52 29					474
82	HD 24504	03 48 46	47 34 40	23 01 00					492
83	Comp							FcAr Clear	60s
84 - 86	Flat x3							TUNG A=1/2	8s
87	Bias (4)								
88	Comp							FcAr Clear	60s
89	Flat							TUNG A=1/2	8s
90	HD197433	20 38 36	+75 14	23 45 44					400s
91	"			23 52 41 [redacted]					

Spectr. Temp. ..... Dome Temp./Hum. -3.1°C/60.7°C (1715) Transparency Conditions ....Clear.....TD

Focus .....6.8.3.....

Spectr. Temp. ..... Dome Temp./Hum. .....

NORMALIZE ON [redacted] BS603 CCDT=-100 I
536 0 26 1024 41 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 α=6020	250 μ	λ=6563				
										HOMED GRATING, RE-POSITIONED IT	
										TELESCOPE ON E. SIDE	
										T=-5.9°C H=68.6%	
12K		V 5.37	BGV						TELLURIC STD.	POOR SEEING/NO TRAILING.	
12K		V 5.37	BGV						TELLURIC		
										13.3 K.	
830 [redacted]									Hdy Pam	POOR SEEING, some cloud	
950										some cloud.	

71
#2

Emulsion Batches:
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.....

Date Dec 5/6 - 92 Observers Hdy. (24") Fdr/Mkz

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 11192	HD 147433			00:59:38					400
93	"			01:06:34					400
94	COMP							Fstr Clr	60s
95	FLAT							TONG n = 1/2	9s
96	BIAS (4)								
97	HD197433	20 38 36 ~~0 3 8 46~~	75 14 ~~42 3~~ °	00 26 46					400
98	—— " ——			00 33 42					400
99	—— • ——			00:40:39					400
CC 11200	—— " ——			00 47 36					400
201	BIAS (4)								
202	COMP								
203	FLAT								
204	DARK (600s)								
205	BIAS (4)								
206	COMP							Fstr Clr	60s

Spectr. Temp. ..... Dome Temp./Hum. -6.2°C/69.1% Transparency Conditions ....CLEAR..... 72

Focus .....6.83..... (0012)

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
820				CASS CCD	1800 4=6020	250 μ	λ-6563				
870											
850									Hdy		
620										THICK CLOUD.	
790											
720										MORE CLOUD MOVING IN	
										CLOSE SHUTTERS HUMANS	
										LIGHTS ON / DOME ON	
CLEAR!!					All to P.I.W					SNOW...	

73
#3

Date ...Dec 5/6-92..... Observers ..Hdy (24").Fay.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
207	FLAT							TUNG A=1/2	8s	
~~208~~	~~BLANK~~									
208	HO197+33	20 38 36	+75 14	01 44 18					400s	1180
209	"	"	"	01 51 15					400s	1300
210	"	"	"	01 58 12					400s	1300
211	"	"	"	02 05 09					400s	1200
212	"	"	"	02 12 28					400s	1000
213	"	"	"	02 19 25					400s	618
214	"	"	"	02 26 22					400s	8.4
215	"	"	"	02 33 19					400s	240
216	COMP							FLAT Clear	60s	
217	FLAT							TUNG A=1/2	8s	
218	BIAS(4)									

Spectr. Temp. ..... Dome Temp./Hum. -5.8°C/70.1% Transparency Conditions .. Now Clear 74
(0141)

Focus .... 6.83 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 α=6020	250 μ	λ=6563				
1180									Hdy		
1300									Hdy		
1300									Hdy		
1200									Hdy	Cloud Moving In From West	
1000									"		
618									"	Hum≈73%	
814									"	Total Cloud (Quite Thick)	
340									"	Occassional Hole.	
										Cloud/Rack NOT working	
					Nell to P1 W2						

75

Thurs Fri

Date 1.9.92 Dec 10/11 .... Observers .Hdg...T.n.....

SCATTERED LIGHT TEST

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11 219 220	Comp/Stellar HARTMAN Focus			18 41		W	+	FeAr Clear	20/20
11221	BIAS(4)			18 43 58					
~~11222~~	~~Tung~~			~~18 54 136~~				Tung Clear	~~17 sec~~
11222	FLAT			190210				Tung Clear	14 sec
11223	FeNe comp							FeNe A=1/2	5 sec
4 5	Comp/Stellar HARTMAN FOCUS							FeNe A=1/4	10/10
11226	BIAS(4)			19 33 29					
11227	FLAT			19 47 32				Tung A=Clear	33 sec
11228	FeNe comp			19 49 34				FeNe A=1/2	10 sec
11229	FeNe comp			19 54 06				FeNe A=1/2	10 sec
11230	BIAS(4)			19 57 11					~~sec~~
11231	DARK			20 04 11					900 sec
11232	BIAS(4)			20 27					

Spectr. Temp. ..... Dome Temp./Hum. -00.4°C .92% Transparency Conditions ..SNOW..... 76

Focus ...6.83..... FOR Focus Test

Spectr. Temp. ..... Dome Temp./Hum. -00.2°C 92% CSS386 CLOCK IS 2 MINUTES SLOW

central λ 90 cgain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=6020	250u no decker	6563Å	1c: 2c:		360 0 12 1024 40 1 ccdfmt	
								1c:		4 min 45 sec FULL CHIP now	
TOO STRONG,	SATURATED									CCDFMT 0 0 1024 1024 1 1	
								2c:	Hdy	15526 ADUMAX	
								2c:		12721	
						Pinhole		3c: 4c:		580 0 20 1024 1 1 CCDFMT -0.03°C	
										0 0 1024 1024 1 1	
										14173	
										15194	
										15105	
										ONLY 2 COSMIC RAYS	
										PRE-ENTERED	
							All, including previous night to				
							Perseus & WORM.				

77 SAT - SUN

Emulsion Batches: .....

Date 1992 Dec 12/13. Observers Jn [Only one Here at all] .....

MUCH CARE Taken not to Vibrate anything

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05283 5284	Hartman Focus Test	INBOARD/OUTBOARD		19 22		2 40 W	+940	ThAr	2/2
85	Comp Tests with Tel not			20 45 36		0 0	-3225	ThAr	10se
86	moved OR Touched At All.			21 00 52					
87				21 09 33					
88				22 32 18					
89				00 09 24					
90				01 04 48					
91				01 39 19					

Spectr. Ter
Focus ..1
Spectr. Ter
Exp Mtr.

Spectr. Temp. ..... Dome Temp./Hum. 00.0°C 84% Transparency Conditions. SHRT CLEAR 78

Focus 2.235 But too much scatt on Dome,

Spectr. Temp. ..... Dome Temp./Hum. ..... CCD T = −100.5°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600l/mm x grating	60u 600u	5158Å		vel Red FOR OUTBOARD	FOCUS FORMAT 0 0 64 1024 16 1 CCDFMT	OK
		Echelle Tilt=		17.66	tilt=.403			3c		270 0 120 1024 11 CCDFMT	
								4	Dome T= −00.3°C		
								5			
								6	Dome T= −00.6°C		
								7			
								8	Dome T= −01.4°C		
								9	Dome T= −01.6°C		

TA P1 #1 Sun Mon Meylan program too

Date 1992 Dec 13/14 Observers K.K. / I.T.

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05292	BIAS(4)								
5293 5295	FLATS x 3			18 00		07 34W	+7 27	Tung	6sec
5296	Comp for Capella			181631				ThA	4sec
5297	HD34029	05 09 18	+45 54 00	18 ~~2451~~		05 34 E			196
5298	Comp							ThAr	4sec
5299	HD34029	05 09 18	+45 54	183009					
5300	Comp							ThAr	4sec
5301	Comp			184216				ThAr	6sec
5302	HD22484	03 31.8	+00 05	184439		0320E			1045
5303	Comp							ThAr	6sec
5304	BIAS(4)								
5305	Comp							ThAr	6sec
5306	HD4307	00 40 24	-13 26	19 2456		00 36W			2500
5307	Comp							ThAr	6sec
5308	HD4307			20 1021					2513
5309	Comp							ThAr	6 sec

Spectr. Temp. ..... Dome Temp./Hum. +0.0°C 69%H Transparency Conditions ... Fine - sl. Hazy ...

Focus ... .232 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCDT -> -100°C 90C GAIN as usual

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle ccd	600 l/mm x grating width	~~103~~	5158Å	1ci		0 0 256 1024 4 1 CCD	
			Echelle X #11	Tilt=17.66 =.403	Height	60u 600u 60u 400u		3ci		MAX = 8K ADU/pixel	
		Note MAR93 Tm x prodcttly .4003						4ci			
* 2460	poor	✓ 0.06	G6 II +G2 III			"		5ci	KK pgm	* 5000 Exp meter sl saturates MAX 11K ADU [this exp]	
	~~poor~~							~~4ci~~			
								~~4ci~~			
								6ci			
								6ci			
190	✓ poor	✓ 4.28	F9 IV-V					7ci	Std Vel	MAX = 800 ADU Slit image very out of focus.	
								6ci			
								1ci		Dome T = -1.9°C	
								6ci			
90	✓ poor	✓ 6.15	G0 V					5ci	Meylan pgm	≤ 500 ADU MAX [≤ 2K ADU Sum 406 subtract bkgnd on Blaze for 10 CO's]	
								5ci			
85								5ci			
								6ci			

81 pg#2 Sun mon

Date 1992 Dec 13/14 ... Observers [KK] ... Tn .....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05310	BIAS(4)								
5311	Comp							ThAr	6s
5312	HD47105	06 31 56	+16 29	21 12 16		3 54 E			835
5313	Comp							ThAr	6s
5314	HD47105	06 31 56	+16 29	21 29 46		3 42 E			686
5315	Comp							ThAr	6s
5316	Comp							"	"
5317	HD62509	07 39 12	+28 16	22 05 58					505
5318	Comp							ThAr	6sec
5319	BIAS(4)								
5320 5324	FLATS x5					0231 W	+10 14	TUNG	5sec

Spectr. Ten
Focus...°
Spectr. Ten
Exp Mtr
2140
2300
2350
4m Flats Top

Spectr. Temp. ..... Dome Temp./Hum. -1.9°C ..... Transparency Conditions .Sl. Hazy 82

Focus ...232.....

Spectr. Temp. ..... Dome Temp./Hum. .....

C LAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD		60μ 400μ	5158Å	1c;			
2140	✓✓ poor	B 1.9	A0 IV					~~3c;~~	Kk pgm	≈ 8k max in Blaze CCDT = -102.2°C	
								6c;			
2300								3c;	Kk pgm		
								6c;			
								6c;			
2750		V 1.14	K0 III b					4c;	Std Vel	somewhat strong	
								6c;			
								1c;	Dome T = -1.7°C		
								6c;	All to Perseus & WORM		
4th From TOP		5094Å → 5130Å						λ	RANGE of 5th complete order FROM TOP [OF 8 complete ones) 5140.5Å → 5158 central → 5175Å Red		
					6th ORDER FROM TOP			[	5187Å → 5224Å		

83 Thurs – Fri

Date 1992 Dec. 17/18 Observers TN

Emulsion Batches: .....

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Reg Echelle CCD Flexure Test

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
						HRS			
CCD 5325	Bills(4)			22 21 23		08E	+45°		
5326	Comp			22 23 17		08E	"	Th/Ar	20s
27	"			22 25 57		07E			
28	"			28 38		06E			
29	"			31 28		05E			
30	"			34 34		04E			
31	"			37 22		03E			
32	"			40 35		02E			
33				45 03		01E			
34				48 04		00			
35				50 35		01W			
36				52 54		02W			
37				55 13		03W			
38				57 22		04W			
39				22 59 55		05W			

Spectr. Temp. ..... Dome Temp./Hum. +2.2°C 79.5% Transparency Conditions ... Cloudy 84

Focus .236.....

575 0 140 1024 1 1 CCDFMT

Spectr. Temp. ..... Dome Temp./Hum. .....

CCD → -100°C 90 CGAIN

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					Echelle CCD	600 ln/mm X grating H=	60u 200u	5170Å	1ci	Y grating = .400 Echelle Tilt 19.00	Dome T = +2.1°C	
	All Hrl	changes	Dome	Smooth	ly				1ci			
									2ci			
									3ci			
									4ci			
									5ci			
									6ci			
									7ci			
									8ci		Big Dome Turn from NE To West between exp	
									9ci			
									10ci	Dome T = +2.0°C		
									11ci			
									12ci			
									13ci			
									14ci	Dome T = +2.0°C		

85 SAT SUN

Emulsion Batches: .....

Date 1992 Dec 19/20 Observers T.m ....

Non Tel movement Fleture "CASS" Tel. West. SIDE

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11233	BIAS(4)					00 00	+45°		
~~34~~ 35	Comp Comp/Stellar Hartman			~~16 1411~~				FeNe clear	60s
36				18 14 11					
37				18 54 49					
38				20 04 40					
39				20 57 04					
40				22 05 50					
41				23 09 46					
42				25 58 41					
43				01 58 50					
44				01 28 26					
45	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. +3.0°C 82% Transparency Conditions . Cloudy 8c

Focus . . . 6.83 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... C. 24mB14 CCDT -> -100°C 90C6A1h

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~Filt.~~	Program Dome T °C	Remarks	Quality
				CASS CCD	1800l/mm G=4990	200u pinhole	5140Å	1c:	[Temp Last few days very stable 0°C I 3°C		
								3/4c:	+3.0	(stellar .1 pixel Blue shift)	
								5c:	3.0		
								6c:	3.0-3.1		
								7	+3.1		
								8	+3.1		
								9	+3.1		
								10	+3.1		
								11	+3.1		
								12	+3.1		
								13	3.0 - 3.1°C		
								1c:			
On the spot Results show Yshift over time Rng of ± .5 pixels										[<.1 pixel xshift over range NO PARTICULAR effects	

87 Sum Mon Pg #1

Date 1992 Dec 20/21 Observers Fich/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCI1246	BIAS(4)			18 32		0 0	+44°		
11247	~~Focus~~ Comp			19 17 29				FeNe Clear	10sec
11248	S128	21 30 36 (1950)	+55 38 41	19 24 45		03 44 W			565s
11249	S128	"	"	19 34 43					1537
~~50~~	~~Second Obj East of S128~~			~~20 05 08~~					~~496~~
50	Comp							FeNe Clear	10 sec
51	BIAS (4)								
52	Comp							FeNe Clear	10s
53	SA0244694	04 30 44	+50 54 01	20 28 08		E			502s
54	Comp							FeNe Clear	10s
55	Comp							"	4
56	S212	04 36 50	+50 21 35	20 46 40		01 41 E			1800s
57	"			21 17 24					1800s
58	"			21 47 45					1800
59	"			22 18 44					-

Spectr. Temp. ..... Dome Temp./Hum. -2.8°C 50%H Transparency Conditions S/ hazy

Focus ~~6.40~~ 7.00

CCDT → -100°C

90CGAin

Spectr. Temp. ..... Dome Temp./Hum. 425 0 40 1024 8 / CCDFoit ~~All 0~~ ~~Quad~~ ~~47²~~ ~~Slit~~

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Tel encoders normalized on BS 8476				CASS CCD	1800 l/mm G4080 no decker	25μ	3720A	1ci		-00 00 09 For encoder +00 00 09 offset SAO 03471	
								3ci			
44		VV Faint						4ci	HII Regions	Δα -00 00 12 Δdec +00 01 03 [for SAO 033485]	
110								5ci		Δα 00 00 02 FOR S128 Δδ 00 02 06	
58									[Faint star]	Barely visible on Slit	
								6ci		1.246 AIRMASS @ 19:30	
								1ci		Dome T = -4.4°C	
								7ci			
1130	6"							8ci		ΔRA 00 00 7 FOR Encoder ΔDec -00 00 27	
								~~9ci~~			
								~~9ci~~	~~HII rgn~~		
99								10ci	HII rgn	1.05 AIR MASS	
105								11ci			
100								12ci			
100								13ci		Max contrast on faint star like OBJ That was ≈ 15" south of slit on previous exp.	

89 #2 sun moon

Date 1992 Oct 20/21 Observers Fich - Tr

Emulsion Batches:

Plate No.	Object	R.A. 1900 1950	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
cc11260	S212	04 3650	+50 2135	22 51 55						
11261	Comp							FeNe clear	10sec	
62	BIAS(4)									
63	FLAT					00 40W	+50°	TUNG clear	60sec 30s	
64	Comp							FeNe clear	10sec	
65	ORion	2000 epoch 05 35 18	-05 24	23 52 47					80s	480
66	"			00 07 29	edit header				1253	860
67	Comp							FeNe clear	40s	
68	Comp							"	"	
69	S219	1950 04 52 23	+47 18 51	00 47 33					1882	60
70	"			01 19 29						60
71	Comp							FeNe clear	10s	
72	BIAS(4)									
73	Comp							FeNe clear	10s	
74	Comp for S241	06 00 46 ~~S241~~	+30 15 37	02 09 41				~~FeNe~~ clear	~~10s~~	

Spectr. Temp. ..... Dome Temp./Hum. -4.8C 65%H Transparency Conditions ..... SI hazy 90

Focus ..... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.7°C .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800l/m G4080 no	250μ detector	3720Å	14ci	HII Region		
								15ci			
								1ci		Dome T = -5.0°C	
								16ci		MAX = 7K ADU/pixel	
								17ci			
480								~~18ci~~	30" west of Trapezium		
860								18ci			
								~~19ci~~			
								19ci			
100								20ci		guided 1" SOUTH 8" from central star & SLEAST	
100								21ci		guided 5" NORTH of central star	
								22ci			
								1ci		-5.5°C Dome T	
								~~33ci~~ ~~33ci~~		~~[illegible]~~	
								~~24ci~~ ~~23ci~~	HII pgm	guided 5" South of central star	

91 #3 sun mon

Date 1992 Dec 20/21 Observers Fich/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900 ~~1900~~ 1950	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11275	S241	060046	+30 15 37	02 40 36		02 55W			2115
76	"			03 18 34					2081
77	Comp							NeNo Clear	10s
78	BIAS(4)								
79	FLAT							Tung A=Clear	60s
SBIG Filename									
S241	S241 SBIG Image on		SIIT [CONTRAL STAR]			03 37W			
S241B	" "	"	"	"				2sec Int	

Spectr. Temp. ..... Dome Temp./Hum. 6.0C ... 65% Transparency Conditions OK 92

Focus ... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=4080	250 FULL	3720Å	25ci	HII Region		
								26ci			
								27ci			
								1ci			
								28ci			
2 sec Integrate Auto contrast									This obj too faint to see with EEV when in "TV" mode		
[non AUTO contr] Backing changed to					60 from	25					

'43 pg#1 Mon-Tues

Date 1992 Dec 21/22 Observers FICH / T.H.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11280	BIAS(4)			00 11 47					
281 282	Focus	Comp / Stellar Hartmann		00 37		0 0	+30	Fe Ar Clear	20/20
283	Comp					"	"	"	40s
284	S241	1950 06 00 43	+30 22 45	00 43 21					862
285	"			01 01 11					381
286	SKY 10° from S241			01 11 15					354
287	Comp							Fe Ar Clear	40s
288 289	FLATS x2							TUNG A-1/4	12sec
290	Comp							Fe Ar Clear	40s
CC11291	S241	1950 06 00 43	+30 22 45	01 57 37		01 57 W			853
92	Comp							Fe Ar Clear	40s
93	Comp							"	"
94	ORION			02 22 32					330
95	"			2939					77s
96	"			3404					600s

Spectr. Temp. ..... Dome Temp./Hum. +1.4°C ..... 69% Transparency Conditions .. PART Cloudy 94

Focus .. 6:88 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

90CGAM CCDT ⇒ −100°C

9250 40 1024 8 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	1800/mm G=6080	250u FULL	6650Å	1ci			
								3/4		20 24 Stellar .4 Red 650 660 xpld	
								5ci			
55								6ci	HII Regions	Cloudy end	
45								7ci		Some cloud	
								8ci		thick cloud	
								9ci			
								10ci 11ci			
					1800/mm G=6095		6670Å	12ci			
								13ci	HII regions	PART Cloudy - mostly SO	
								14ci			
320								15ci		Hα maybe saturated	
								16ci			
								17ci			

96 pg #2

Emulsion Batches:

Date 1992 Dec 21/22 Observers Fich./Tu

Plate No.	Object	R.A. ~~1900~~ 2000	Declination ~~1900~~	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 11297	ORION	05 35 10	-05 24	02 34 35					60 sec
98	"			02 35 51					"
99	"			02 37 10					"
11300	"			02 38 31		02 51 W			"
01	"			02 40 14					"
02	"			02 41 49					100s
03	"			02 43 58					"
04	"			02 45 56					
05	Comp			02 46				FeAr Clear	40s
06	BIAS(4)							"	
07	Comp			02 53 36				FeAr Clear	40s
08									
10	FLATS x 3								10 sec
11	S 770	1950 06 07 24	+12 49	03 11 38					821
12	Comp							FeAr Clear	40
13	Comp for HD87901							"	"

Spectr. Temp. ..... Dome Temp./Hum. −09°C 66% Transparency Conditions ..PART. Cloudy..... 9L

Focus ..... 6-88 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	G=6095	350μ FULL	6670Å	17c;	HII Region		
										6.6K MAX	
								17c;			
								18c;			
								18c;			
								19c;			
								~~20c;~~		Dome T = −10°C	
								20c;			
								21c;		MAX 88K ADU	
140								22c;	HII Region	some cloud again	
								23c;			

97 pg#3

Date 1992 Dec 21/22 Observers ...Fich.-Tn.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD314	HD87901	100303	+12 27						219
315	Comp		1993					Fe-Ar Clear	40sec
316	SKY	10 07	+1213			00 14E	+12 12 45		931s
~~317~~ 320	BIAS(4)							~~TUNG~~ A=1/4	
~~317~~ ~~318~~ 319	FLATS x 3			0407		00 00 30m	+12 12	TUNG A=1/4	14sec

Spectr. Temp. ..... Dome Temp./Hum. -1.3C..66% Transparency Conditions ...Cloudy.....98

Focus ..6.88.....

Spectr. Temp. ..... Dome Temp./Hum. -1.5C..70%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
32K				CASS CCD	1800 l/m G=6095	250	6650	24	Telluric Std	guided Early Some Thick cloud	
								25		1.19 AIR MASS 5.5 AOU MAX	
								26	SKY/spectr	cloud (drive on)	
								1			
								27		14K MAX	
					All to		Perseus & WORM				

99
#1

Emulsion Batches:
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Date Dec 26/27...-99..... Observers ... F.Br. (Seavilles) / Bhrm

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11322	Focus Test								
11323	BIAS								
324	Comp							Fe Br Clear	60s
325	HD203156	21 15 23	+37 49	19 11 28	4 09 W	4 09 W			795
326	Comp							Fe Br Clear	60s
327	Bias (4) ←	NOTE: NOT A BIAS (IT IS A FLAT)							
328 - 330	Flat x 3							Tung A = ½	10s
331	Bias (4)								
332	Comp							Fe Br Clear	60s
333	HD36485	05 26 54	-00 22 00	19 53 31		3 02 E			1840
334	Comp							Fe Br Clear	60s
335 - 337	Flat x 3							Tung A = ½	12s
338	Bias (4)								
339	Comp							Fe Br Clear	60s
340	HD37468	05 33 44	-02 39	23 33 09					540

Spectr. Temp. ..... Dome Temp./Hum. -9.6°/62.9% Transparency Conditions ..... CLEAR - STEADY. WEST. 100

Focus ..... 6.88 ..... (1736)

Spectr. Temp. ..... Dome Temp./Hum. .....

NORMALIZE ON BS27

90 gain CCD T = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 α = 5910	200 μ	λ = 6400			480 050 1024 4 1 adfint	
										CAMERA PROBS - TOOK 45 while to get started	
5500		V 8-9	F2	CASS CCD	α = 5910	200 μ	λ = 6400		RM (TOP PRIORITY)	OCCASIONAL CLOUD. VERY WINDY	
					α = 6020		λ = 6563			T = -10.9°C / HUM = 68.3%	
									B1n	SORIC - PASSING CLOUD	
4550	POOR	V 6 8 7	B2 V p							POSSIBLE SNOW - CLOSE	
										ATTEMPT TO OBSERVE @ 2100 - TOO CLOUDY	
					α = 6110		λ = 6643		Lu →	INCORRECT WAVELENGTH REGION FOR 4037/68!	
35K		V 3.75	09 V						B1a PAM	SO AB - RED OF H_α	

101
02

Date Dec 26/27-92 Observers Fbr./Bhm

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
341	Comp							FeAr Ceu	60s
342	HD37468	05 33 44	-02 39	22 49 42	(σOri AB)				780
343	Comp								
344	Bias								
345	Comp								
346	HD37479	05 33 44	-02 39	23 11 32	(σOri E)				1049
347	Comp							FeAr Ceu	60s
348	HD37479	05 33 44	-02 39	23 35 29					914
349	Comp								
350	Bias (4)								
351 - 355	Flat x 5	Note 11352 is not a flat (it is a dark)						TiN Δ=½	

Spectr. Te
Focus....
Spectr Te
Exp Mtr
50K
5k
4033

Spectr. Temp. ..... Dome Temp./Hum. −11.6°/69.9% Transparency Conditions Partly Cloudy 102

Focus 6.88

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 G=6110		λ=6640(G)		R		
50K		V 3.75	CASV			cols: 26-31			Bln σor.AB	WHERE IS THE BROAD EMISSION LINE? SATURATION?	
5K		V 6.53	B3						Bln Rym. σorE	24-31 pcds	
				NOTE: NOT CORRECT							
4023					REGION - CENTRED						
					TOO RED -					CLOUD / LIGHT SNOW.	
					All for Perseus ! WORM.						

103

Date 1993 Jan. 5/6 Observers Hdy

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 11356 fits	bias(1)			16:02:35					
7	bias (1)			16:06:36					
8	dark			16:08:02					60s
9	bias(1)			16:10:12					
	CHIP HEATED TO -60, COOLED TO -100 WITH CCDC RUNNING								
11360	bias(1)			17:04:46					
1	dark			17:05:20					600s
2	bias(1)			17:15:32					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 104

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

tests

480 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								1ci		SATURATED! T_{CCD} = -95 & -100	
								2ci			
								3ci		SHELF SEEN IN DARK	
								4ci			
								5ci		T_{CCD} = -100.5°e	
								6ci		NO SHELF	
								7ci			

105 pg #1 Fri – Sat

Date 1993 Jan. 8/9 Observers Hdy/Fbr/Fn

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
FMD0474BD ACE F	HD 3765	00 35.3	+39 40	1750					9 minute	55 55
cc 11363 fls cc 4	COMP FOCUS TEST STEL			1755				FeAr Clear	60s 60s	
cc 11365	BIAS(4)									
cc 11366	DARK			18 05 47					600s	
cc 11367	BIAS(4)									
11368	Comp							FeAr Clear	60sec	1201
11369	HD 3765	00 35 18	+39 40	18 26 29	~~2027~~	00 55W			745	1730
11370	Comp							FeAr Clear	60s	
11371	Comp							"	"	
11372	HD 42545	06 06 12	+16 09 11	18 50 28		04 13 E			656	8 30 4
11373	"	"	"	19 02 04					871	8 30 0
11374	Comp							FeAr Clear	60s	
11375	BIAS(4)									
11376										
11378	FLATS X3							TUNG A=1/2	10sec	
11379	Comp							FeAr Clear	60sec	

Spectr. Temp. ..... Dome Temp./Hum. ...7°C ...52% Transparency Conditions ...Fine..... 10c

Focus ..6.88.....

Spectr. Temp. ..... Dome Temp./Hum. -5.4°C 54%

FANS on By 1715

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
55x55		✓ 7.36	dk5	4x67ms + 2x133ms	1800 l/mm 530=G	300u Below SLIT 300u no decker	5486Q		seeing test	EEV 25mm Camera Dome West, no wind FANS ON 480 0 50 1024 4 1 ccdfmt STEKUR SI Red.	
	T=-4.7°C										
1201											
3730	4"	7.36	dk5					4ci	std. vel.		
								5ci			
								6ci			
21000	4"6"	✓ 4.95	B5½m					7ci	Telluric Std	5K ADU MAX 2.109 AIR MASS	
30000								8ci	"		
								9, 10, 11		12.4K MAX ADU	
								12ci			

#2 (107)

Emulsion Batches: .....

Date 1993 JAN 8/9 Observers Hdg/Fbr/Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
11380	HD20418	03 12.0	+49 43.8	19 40 44						2,140
81	Comp							FeAr Clear	60s	
82	FLAT							Tung A=1/2	10s	
83	BIAS(4)									
84	PARK					06 39E	+17°			
85	BIAS(4)					"	"			
86	BD+18°2307			20 50 33					420	
87	Comp							FeAr clear	60s	
88	Bias									
89	Flat	BREAK						Tung A=1/2	10s	
11390	BD+18°2307								410s	342
91	COMP							FeAr Clear	60s	1472
92	FLAT							Tung A=1/2	10s	
93	BIAS(4)									
94	BD +18°2307	9h 56m 12s	+17°53'27"	22 48 42					410s	378
95	BD +18°2307			22 55 50					410s	373

Spectr. Temp. ..... Dome Temp./Hum. -5.6°C 54% Transparency Conditions .... FINE ..... 1st .....

Focus .... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... SI Hazy For East

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
21,400	4"	V 5.03	B5V		1800 l/mm G-5530	300µ Full Length	5460Å	13i	Telluric Std	no good For NeO 1.0124 AIR MASS	
								14i			
								15i			
								1i			
								2i			
								1i		Dome T = -5.8C ALMOST ALL SHY	
								17i			
362									FANS OFF NOW		
11472											
										11751 K	
378								5i		X=1.94	
373											

169
#3

Date 1993 Jan 8/9 Observers Hdy / Fbt / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 11396	BD +18° 2307	$9^h 56^m 12^s$	+17° 53′ 27″	23 02 59					410s
97	〃			23 10 08					〃
98	〃			23 17 30					〃
99	〃			23 24 39					〃
11400	〃			23 31 48					〃
01	〃			23 38 57					〃
02	BIAS 4			23 46 12					〃
03	COMP			23 47 16				FeAr Clear	60sec
04	FLAT			23 49 38				FeAg A=1/2	10sec
05	BD +18° 2307	$9^h 56^m 12^s$	+17° 53′ 27″	23 51 33					410s
	〃			23 58 40					〃
	〃			00 05 49					〃
	〃			00 12 58					〃
	〃			00 20 07					〃
	〃			00 27 16					〃
11	〃			00 34 26					

Spectr. Te
Focus
Spectr. Te

Exp. Mtr.
342
350
344
405
415
417
1899
421
414
419
421
412
412
704

Spectr. Temp. ..... Dome Temp./Hum. -7.0°C/57.5% Transparency Conditions DOME CIRRUS 1/10"

Focus G-88

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
342											
390											
394											
405											
415											
417											
11899								6c;			
								7c;		12785 ADH	
421								8c;		STAR4DDS.BAT	
414											
419											
421											
412											
412											
404											

III #4

Date 93 - JAN 8-9 Observers Hdy / Fbr / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 11412	BD+18°2307	9h56M12	17 5327	00 41 35					41Ds
13	Bias								
14	Flat							Tung 45½	10s
15	Comp							IRSr Clear	60s
16	BD+18°2307	9 56 12	17 5327	00 53 35					41Ds
11417	"			01 00 45					"
18	"			01 07 56					"
19	"			01 15 06					"
20	"			01 22 17					"
21	"			01 29 27					"
22	"			01 36 38					"
23	"			01 43 48					"
24	COMP							FeAr Clear	60s
25	FLAT							Tung A=1/2	10s
26	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. 7.6°C/57.5% Transparency Conditions ..... HAZE: PTY. CLOUD 1/2

Focus 6.88 (0045)

Spectr. Temp. ..... Dome Temp./Hum. ..... C LAMBERT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
399				CASS CCD	1800 l/mm	300u Full Length	5880Å		Hdy-pgm		
414											
394											
385											
378											
358											
350											
354											
335								5ci			
12594											
32										15666 ADU	

113
#5

Date 1993 - Jan 8/9 Observers Hdy/Fbr/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. Exp. Mtr.
cc11427	BD+18°2307	9h56m12s	+17°53'27"	01 55 22					410s	320
28	"			02 02 33					"	302
29	"			02 09 43					"	315
430	Bias (4)									
431	Comp							Fbr Clear	60s	
432	Flat							Emy d=1/2	10s	
11433	BD+18°2307			?					410s	336
34	"			02 31 37					"	323
35	"			02 38 47					"	340
36	"			02 46 41					"	345
37	"			02 53 52					"	340
38	"			03 01 10					"	349
39	"			03 08 21					"	351
40	"			03 15 31		00 18W			"	357
41	BIAS(4)									
42	COMP							FeAr Clear		

Spectr. Temp. ..... Dome Temp./Hum. 8.1°C / 59.0% Transparency Conditions .. SOME CIRRUS ..... 1.14.

Focus .... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
320						300u Full Length		5c;	Hdg pgm		
302											
315											
										SPEC CONTROLLER RESETTED GRATING WAS DISABLED	
										15498 ADU MAX	
336								5c;			
323										TOOK OFF TO FOCUS	
340											
345											
340											
348											
351											
357								5c;			

IIS #6

Date 1993 Jan 8|9 Observers Hdy/Fbr/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
11443	FLAT							Flat A=1/2	8sec
11444	COMP								60s
45	HD 87901	10 03 03	12 27 22						54s
46	"			03 35 17					41s
47	COMP							FeAr Clear	60s
48 49 50	FLATS x3								
51	BIAS(4)								
11452	BD+18°2307			03 51 22					410

Spectr. Tem
Focus
Spectr. Tem
Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. -9.1°C/61.0% Transparency Conditions ...Cloudy..... 1.16.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										11279 ADU MAX	
34690										9879	
32000											
										12238 ADU 11919 11843	

117
#1

Date 1993 Jan 9/10 Observers Hdy/Fbr/Tn

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 11453, 4, 5	Focus Test BIAS(4)	Comp/ Stellar Hartmann		17 45		00 08W	+40 11		
FMD0475ABCDEF	HD 3765	00 35 18	+39 40					"N" mode	
11456	DARK								600s
11457	BIAS(4)								
11458	Comp							FeAr Clear	60s
11459	HD 3765	00 35 18	+39 40	18 12 40		00 44W			60s
11460	Comp							FeAr Clear	60s
11461	FLAT							Tung A=1/2	7sec
11462	Nova Cyg 92	20 27 43	+52 17 39						
11463	Comp							FeAr Clear	60sec
11464 465	Focus Test for NaD Region					5 00E	+36°		
11466	Comp							FeAr Clear	60s
467	HD 87901	10 03 03	+42 27	20 50 59					339
68	COMP							FeAr Clear	60s
69 70	FLAT x2							Tung A=1/2	10s
71	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. -7.5°C 47.6%H Transparency Conditions ..Clouding in..... 118

Focus 6.86 – 6.93 at 20 30EST

Spectr. Temp. ..... Dome Temp./Hum. -10.0°C/47.5% CLAMBDA

90 CGAIN, CCDTemp=-100C

480 0 50 1024 4 1 CCDFast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=6020	300u Full length	6563 Å		Focus Test	Right on sags For	
55 x 55 pixels		V 7.36	dk5	2x133ms Integration +4x67ms		300u Below Slit			Seeing Test	Dome West, No wind Tel NORMALIZED on same STAR	
1600	4"	V 7.36	dk5						std vel	Cloudy	
										62.5 K ADU MAX	
								6ci	Weak, but obvious Hα	Tel East side	
							6563A				
Dome T= -9.6°C	set 6.93				1800 G=5530		5880 Å		stellar vsl	Red	
								3ci			
12222								4ci	Telluric STD	Cloudy X=10.5	
										11444 ADU 10979	

119.
#2

Date 1993 Jan 9/10 Observers .....

Emulsion Batches:
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.....
.....

21/2243

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
72	COMP ∈ IGNORE			04 12				FeAr	60s
11472	COMP ∈ OK			21 [illegible]				Clear	
74	HD 87901	10 0303	+12 2722	220710					60s
75	COMP							FeAr Clear	60s
76	FLAT x 2							Tung A=1/2	10s
77									
78	BIAS(4)								

Spectr. Te
Focus....
Spectr. Te

Exp Mtr

30 300

Spectr. Temp. ..... Dome Temp./Hum. ~~-10.0°C / 42.5%~~ -10.1°C / 46.9% Transparency Conditions 120

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								10c;			
36300								11c;		7403	
								3c;			
								4c;		11742	

Comparison Filter Exp

Ar 60s

60s

10s

121

Emulsion Batches:

Date ...JAN 14/15-93... Observers .....Hdy./Tn./For....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCI1479	BIAS (4)								
480	COMP							FeAr Clear	90s
481	NOVA CYG 92	20 27 43	52 17 39	18 06 15					399 ~~450~~
482	"	"	"	181310		05 18W			835
483	Comp			1828				FeAr Clear	90s
484	Comp							FeAr Clear	90s
485	HD42545	06 06 17	16 09 11	183857					2087
486	Comp							FeAr Clear	90s
487	BIAS(4)								
~~488~~ 490	FLATS x 3							TUNG 4=1/2	
491	BIAS(4)								

Spectr. Te
Focus...6
Spectr. Te
Exp Mtr
150
1950

Spectr. Temp. ..... Dome Temp./Hum. -6.5°C/61.3% Transparency Conditions ... PTLY. CLOUDY ..... 122.

Focus ... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

FANS ON @ 1700

90 CGAIN CCD T → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G:6010	300 μ Full Length	λ=6563Å			A80 0 50 1024 4 1 CCD FAST	
								3ci			
150								5ci	NOVA PGM.	Hazy vv faint	
								6ci	"		
								~~7ct~~			
								7ci			
10,950	3"	V 4.95	B5 V$_n$					8ci	TELLURIC STD.	1.83 AIRMASS	
								9ci			
								1ci			
								10ci		11.3 K ADU MAX	
										Dome T = -7.9°C	

123

Emulsion Batches:

Date ... Jan 15/16-93 ... Observers ... Hdy (24") / Fbr ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
cc11492-3	Focus Test							FeAr Clear	60s	
494	Bias (4)									
495	Comp							FeAr Clear	60s	
496	H087901	10 03 03	12 27 22	20 34 ~~36~~					401s	10K
497	H087901	"	"	20 41 30					346s	25K
498	Comp							FeAr Clear	60s	
499	Flat	10 03 03	12 27 22					Tung Dif		
500	Flat							"		
501	Flat							"		
502	Bias (4)									

Spectr. Temp. ..... Dome Temp./Hum. −3.9°C / 73.1% Transparency Conditions ... Clear → P.Cly. Cloudy/24
(2004)

Focus ..... 60.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCD Temp = −100.0°C

480 050 1024 41 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G-6020	300 μ	λ=6563				
20K								4Ci	TELLURIC	AIRMASS: 9.43 / THIN CLOUD	
25K								SCi	— " —	SEEING SUDDENLY BAD COULD BE ANGLE. THICK CLOUD	
										13 8K MAX	
										THICK CLOUD - CLOSE	

125
#1

Date ... Jan 17/18-93 ... Observers ... Hdy(24") / Fer .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc11503-4	Focus									
505	Bias (4)									
506	Comp							Flat clear	60s	
507	HD 87901	10 03 03	~~10 03 03~~ 12 27 22	21 08 55					117s	35K
508	"	"	"	21 12 20					126s	40K
509	Comp	"	"					Flat clear		
510	Flat							Tung D=1/2	10s	
511	Flat							"	"	
512	Flat							"	"	
513	Bias (4)									
514	Comp							Flat clear	60sec	
515	BD+18 2307	09 56 12	17 58 27	21 30 16					140s	272
516	"			21 37 24					140s	137 (000
517	"			21 44 33					"	100
518	"			21 51 42					"	50
519	"			21 58 50					"	434

Spectr. Temp. ..... Dome Temp./Hum. ~6.4°C/49.9% (2056) Transparency Conditions .....CLOUDY → P.THR. CLOUD 0.8

Focus .....6.93.....

Spectr. Temp. ..... Dome Temp./Hum. .....

NORMALIZER ON BS1454
480 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=5530	300 μ	λ:5880			POOR SEEING & NaD	
35K									TELLURIC	NO TRAILING (LOGGED)	
40K									— " —	AIRMASS = 3.91 (LOGGED)	
										31,768 MAX	
272		V 9.4-993	KOV						Hdy	HEAVY CLOUD. BATCH	
187 (000!)										STARTED - LET RUN TO	
300							ALMOST ALL SKY			GET ANY POSSIBLE DATA.	
480							SKY ONLY			- COUNTS ARE SKY!	
434							SKY ONLY				

127
2

Emulsion Batches:
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Date Jan 17/18-93 Observers Hdy (24") / Fbr

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
520	BD+18 2307	09 56 12	17 53 27	22 05 59	[illegible]				410s
521	"	"	"	22 13 07					410s
522	"			22 20 16					410s
523	Bias (4)								
524	Comp							Fbr Clear	60s
525	Flat							TUNG N=1/2	10s
526	BD+18 2307	09 56 12	17 53 27	22 32 09					410
527	"	"	"	22 39 18					410
528	"	"	"	22 46 26					410
529	Comp							Rbl. Clear	60s
530	Flat							TUNG N=1/2	10s
531	Dark (600s)								
532	Bias (4)								
533	Bias (4)								
534	Comp							Rbl Clear	60s

Spectr. Temp. ..... Dome Temp./Hum. -7.2°/51.4% Transparency Conditions ....Clouds...Moving. 138
(2138)

Focus .....6.93.....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCD T: -100.6°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
252				CCSS CCD	1800 λ-5580	300 μ	λ=5880		Hdy	Cloud, Cloud, Cloud	
260									"		
230									"	Clear Now	
219										11, 914 max	
273							ALMOST ALL SKY				
										Max=12174	

129
3

Emulsion Batches:
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Date ....JAN. 17/18-93.... Observers ....Hidy./Fbr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11535	FLAT							TUNG A-½	10s
536	BD+18 2307	09 56 12	17 53 27	01 21 47					410s
537	"	"	"	01 28 56					"
538	"	"	"	01 36 04					"
539	"	"	"	01 43 27					"
540	"	"	"	01 50 36					"
541	"	"	"	01 57 44					"
542	"	"	"	02 05 00					"
543	"	"	"	02 12 08					"
544	BIAS (4)								
545	COMP							FeAr Clear	60s
546	FLAT							TUNG A-½	8s
547	BD+18 2307	09 56 12	17 53 27	02 23 38					410s
548	"	"	"	02 30 46					"
549	"	"	"	02 37 55					"

Spectr. Ten
Focus....
Spectr. Ten

Exp Mtr
286
317
354
355
385
394
423
447
478
475
465

Spectr. Temp. ..... Dome Temp./Hum. ..7.3°C/53.19.. Transparency Conditions .. Occasional Good ....130.
(0117)

Focus .....6.93.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 G: 5530	300 μ	λ:5880			15,181 MAX	
286											
317										CLEAR SKY.. FOR NOW.	
354											
355											
385											
394									S/N = 50		
373											
367											
										11704 ADU	
278										POOR SEEING - SYSTEM	
275										MAY BE MOVING IN.	
265										SEEING IS IN TOILET.	

#4 131

Date ...JAN.17/18-93... Observers ..Hdy/Fbr.....

Emulsion Batches:

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.....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
550	BD+18 2307	09 56 12	17 53 27	02 45 03					410s
551	"	"	"	02 52 31					"
552	"	"	"	02 59 40					"
553	"	"	"	03 06 49					"
554	"	"	"	03 13 57					"
555	Bias(4)								
556	Comp							FA-Comp	60s
557	FLAT							TUNG A: 1/2	8s
	~~BD+18 2307~~	~~09 56 12~~	~~17 53 27~~	~~03 20 30~~					

Spectr. Temp

Focus.....

Spectr Temp

Exp Mir	
264	
283	
289	
285	
288	

Spectr. Temp. ..... Dome Temp./Hum. -9.5°C/62.1% (0246) Transparency Conditions ....CLEAR,.....132.

Focus .....6.93.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
264				CASS CCD	1800 G=5530	300 μ	λ=5880Å		Hdy		
283										T=-9.8°C/HUM=66.8% (0304)	
289											
275											
288										S/N=40	
										11,579 Max	
						NaCl to Pt W.				SNOW	

133
#1

Date Jan 18/19-93 Observers Hdy (24") / Fbr

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11558-9	Focus (NaD)								
560	Bias (4)								
561	Dark (900s)			185603					
562	Bias (4)								
563	Comp							Fbr Clear	60s
564	HD87901	10 03 03	12 27 22	201422					638s
565	Bias (4)								
566	Comp							Fbr Clear	60s
567,8,9	Flat x 3			~~203905~~				Tung A=1/2	
570	BD+18 2307	09 56 12	17 53 27	203905					410s
571	"	"	"	214614					"
572	"	"	"	215322					"
573	"	"		220038					"
574	"	"	"	220746					"
575	"	"	"	221455					"

Spectr. Temp. ..... Dome Temp./Hum. 5.4°C/55.2% Transparency Conditions Clear - Occasional Clouds 134
(1823)

Focus 6.93

Spectr. Temp. ..... Dome Temp./Hum. ..... Normalize on HR 670

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS LCO	1800 G. 5530	300 μ	λ=5480				
										Looks Terrible	
23.5K										Airmass = 10.819	
175									Hdy	Very Low In Sky	
171											
173											
129											
180											
198											

135
#2

Date Jan 18/19-93 Observers Hdy (24") / Fbr

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
576	BD+18 2307	095612	175327	212203					140s
577	"			212912					140s
578	BIAS								
579	COMP							FLTR LGN	60s
580	FLAT							TUNG N=1/16	10s
581	BD+18 2307	095612	175327	214254					410s
582	"	"	"	2150					"
583	"	"	"	215712					"
584	"	"	"	220420					"
585	"	"	"	221129					"
586	"	"	"	221838					"
587	"	"	"	222547					"
588	"	"	"	223256					"
589	BIAS	"	"						
590	COMP							FLTR LGN	60s
591	FLAT							TUNG N=1/2	10s

* HEADER: OBJECT INCORRECT!

Spectr. Temp. ..... Dome Temp./Hum. -7.1°C / 55.2% Transparency Conditions ..... Clear / Good 136
(2109)

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
193				CASS CCD	1800 c.5530	300 μ	λ=5880		Tidy		
198											
227											
212											
230											
228											
260										Seeing Poor	
260											
263											
259											

#3 137

Emulsion Batches: .....

Date ...JAN 18/19-93.. Observers ...Hdy (24"/ Fbr..... .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
cc1592	BD+18 2307	095612	175327	224959					410	194
593	"			225707					"	260
594	"			230416					"	250
595	"			231125					"	238
596	"			231835					"	265
597	"			232543					"	285
598	"			233252					"	282
599	"			234001					"	288
600	Bias (4)									
601	Cond									
602	Flat									
603	BD+18 2307	095612	175327	235254					410	295
604	"	"	"	000003						294
605	"	"	"	000711						294
606	"	"	"	001420						249

Spectr. Temp. ..... Dome Temp./Hum. -9.1°C/62.1% Transparency Conditions ..... Cirrus - Haze 138
(2246)

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
284				CASS CCD	1200 G:5330	300 μ	λ: 5880		Hdy		
260	2"-3"										
250											
238											
265											
285											
282											
288											
										13,756 max	
295											
294	2"										
274											
249											

134
4

Date ... JAN 18/19-93 ... Observers ... Hdy (24") / Flor ...

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
607	BD+18 2307	095612	17 5327	002129						242
608	"	"	"	002838						230
609	"	"	"	003547						230
610	"	"	"	004255						200
611	Bias									
612	Comp							Fe. Sr. Clear	60s	
613	Flat							Tung A: 1/2	8s	
614	BD+18 2307	095612	17 5327	005415					410s	211
615	"			010124					410	217
616	"			010833					410	235
617	"			011542					410	268
618	"			012251						298
619	"			013000						
620	"			013709						
621	"			014417						

Spectr. Temp. ..... Dome Temp./Hum. -3.7°/62.4% Transparency Conditions ....Clear.....140.

Focus .....6.93..... (2349)

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
242	4"				1800 w=5530	300 μ	λ = 5880		Hdy	Dome T = -3.9°C/Hum = 64 5%	
230										Poor Seeing	
230											
200											
211									Hdy		
217											
235											
268											
288											
~300.											
~~350~~									"		
~350											

14
#5

Date JAN 18/19-93 Observers Hdy(24")/FDr

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ccd1622	Bias (4)								
623	Comp							RAr Cen	60s
624	Flat							TUNG Arc	8s
625	130°18 2307	095612	175327	015533					410
626	"			020242					"
627	"			020951					"
628	"			021700					"
629	"			022408					"
630	"			023117					"
631	"			023826					"
632	"			024535					"
633	Bias								
634	Comp							Fltr Cen	60s
635	Flat							TUNG Arc	8s

Spectr. Ten
Focus.....
Spectr. Ten

Exp. Mtr.
295
308
300
295
325
295
300
240

Spectr. Temp. ..... Dome Temp./Hum. -8.4°C/64.4% (0153) Transparency Conditions ..... CIRRA - HAZE ... 142

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=5530	300 μ	λ=5580Å				
293									Hdy.		
308											
300											
295											
285											
295											
300											
240											
										LOST RACK FOR A BIT	

#143

Date JAN 18|19-93 Observers Hdy.(24").|Fbr.....

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc11636	BD+182307	095612	175327	030231					140	275
637	"	"	"	030940					"	258
638	"	"	"	031649					"	262
639	"	"	"	0323					"	260
640	"	"	"	033107					"	235
641	"	"	"	033816					"	224
642	"	"	"	034524					"	220
643	"	"	"	035233					"	219
644	Bias(4)									
645	Comp									
646	Flat									
647	BD+182307	095612	175327	040744					4105	215
648	"	"	"	041450					11	35
649	"	"	"	042154					"	29
~~650~~	"	"	"	~~056~~					"	~~50~~

Spectr. Temp. ..... Dome Temp./Hum. -8.2°C/.67% Transparency Conditions ... Slight Haze 144

Focus ..... 6.9.3 ..... (0303)

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
275				CASS CCD	1800 G=5530	300 μ	λ=5880		Hdy		
258											
262											
260											
235											
224											
220											
219											
										T=-7.7°C / H=68%	
215	Poor!									Some Cloud to West	
215											
219											
~~220~~											

145
47

Date JAN 18/19-93 Observers Hdy (24")/Fbr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
65D	BD182307	095612	175327	043617					410s
651	"	"	"	044326					"
652	"	"	"	045104					
653	"	"	"	045813					
654	Bias								
655	Comp								
656	Flat								

Spectr. Ten
Focus .....
Spectr. Ten

Exp Mtr
230
145
230
106

Spectr. Temp. ..... Dome Temp./Hum. 7.8°/68.4% Transparency Conditions ... PARTLY CLOUDY 146
(0435)

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

480 0 50 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
230				CASS CCD	1800 G-5530	300 μ	λ=5480				
245											
230										THICK CLOUD	
106										CLOSED	

All to Perseus cluster

147

Date ....Jan 19/20-93..... Observers ....Fkr/Hdy (24")....

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FM00476(A-F)	HD10006								
~~0000000~~	~~XXXXXXXX~~ (GOT ERASED BY ACCIDENT)								
658	DARK (600s)	[redacted]	[redacted]						
659	BIAS(4)								
660	COMP							FeAr Clear	60s
661	HD12029	015300	2854	181810					385
662	COMP							FeAr Clear	60s
663	BIAS (4)								
664	COMP							FeAr Clear	60s
665	HD87901	100303	122722	200401					751s
666	"	"	"	201741					249s
667	COMP							FeAr Clear	60s
668,9,70	FLAT x 3							TUNGSTEN 1/2	
671	BIAS(4)	THIS IS THE SAME AS cc11663.fts,							

Spectr. Temp
Focus .....
Spectr. Temp

Exp. Mtr.	
4K	
10K	
23K	

Spectr. Temp. ..... Dome Temp./Hum. 3.3°C / 55.4% (1753) Transparency Conditions ..... CLEAR - Some Cirrus 148

Focus ..... G.93 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... FANS OFF CCD T = -100.6°C 480 0 50 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 α=5530	300 μ	λ=5880			[67ms x4; 133ms x2]	
3K		V 7.80	K2 III						STD. VEL.		
3											
20K									TECHNIC	AIRMASS → 11.55	
23K										DOME T: -4.5°C / H: 61.3%	
										TOUCH GUIDING	
										MAX = 11,300	
										DO NOT USE	

1.44 #2

Emulsion Batches: .....

Date ....JAN 19/20-93.... Observers ..For./Hdy.(24")..... .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11672	BD+182307	095612	175327	20 3315					410s
673	"			204023					"
674	"			204732					"
675	"			205441					"
676	"			210149					"
677	"			210858					"
678	"			211607					"
679	"			212315					"
680	Bias (4)								
681	Comp								
682	FLAT								
683	BD+18 2307	095612	175327	213654					410s
684	"			214403					"
685	"			215111					"
686	"			215820					"

Spectr. Temp. ..... Dome Temp./Hum. -4.6°/67.9% (2034) Transparency Conditions ..... Clear 1.50

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 480 0 50 1024 41 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
194				CASS CCD	1800 G=5530	300 μ	λ-5880		Hdy	Airmass = 3.65	
175											
183											
183											
197											
198											
210										T=-5.4°C / Hum=65.3%	(2129)
215											
232									Hdy		
239											
244											
257											

151
3

Date ... JAN. 19/20. 93 Observers .. Fbr./Hdy. (24")

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
687	BD+182307	095612	175327	220528					410s
688	"			221237					"
689	"			221945					"
690	"			222654					"
691	BIAS (4)								
692	COMP							Filter Clear	60s
693	FLAT							TUNG A=1/2	10s
694	BD+182307	095612	175327	223808					410s
695	"	"	"	224516					"
696	"	"	"	225225					"
697	"	"	"	225933					"
698	"	"	"	230641					"
699	"	"	"	231350					"
700	"	"	"	232059					"
701	"	"	"	232807					"

Spectr. Temp. ..... Dome Temp./Hum. -5.4°C/65.3% Transparency Conditions ..... CLEAR ..... 1½ ...

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 480 0 50 1024 41 ccd fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
274				CASS CCD	1800 a=5530	300 μ	λ=5880				
282	1"-2"										
292											
300											
315	1"-2"										
325											
316											
320											
319											
315											
340											
318											

193
D4

Date ... JAN 19/20-93 ... Observers ... FDr/Hdy (24") ...

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
702	BIAS									
703	COMP							FLT Cor	60	
704	FLAT							TUNG A=1/2	10s	
705	BD+182307	095612	175527	233853					410	322
706	"	"	"	234601					"	323
707	"	"	"	235310					"	304
708	"	"	"	000019					"	280
709	"	"	"	000727					"	280
710	"	"	"	001435					"	290
711	"	"	"	002144					"	279
712	"	"	"	002853					"	256
713	BIAS (4)									
714	COMP									
715	FLAT									

Spectr. Tem
Focus .....
Spectr. Tem

Spectr. Temp. ..... Dome Temp./Hum. −6.0°C/64.5% Transparency Conditions ... CLEAR ... 1=4

Focus ... 6.93 ... (2330)

Spectr. Temp. ..... Dome Temp./Hum. .....

480 0 50 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 w=5530	300 μ	λ=5480				
322	1"-2"								Hdy		
323											
304											
280										THIN CLOUD	
280											
290											
279											
256											

155
#5

Date ....JAN 19/20-93 Observers ..Fbr/Hdy (24")

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 11716.FTS	BD+182307	095612	175327	003938					410s
11717	"	"	"	004647					"
11718	"	"	"	005355					"
11719	"	"	"	010104					"
11720	"	"	"	010813					"
11721	"	"	"	011521					"
11722	"	"	"	012230					"
723	"	"	"	012939					"
724	BIAS (10)								
725	COMP							Fe Ar Clear	60s
726	FLAT							TUNG Amber	8s
727	BD+182307	095612	175327	014322					410
728	"			015031					"
729	"			015739					"
730	"			020448					"

Spectr. Te
Focus....
Spectr. Te

Exp Mtr.
362
~360
~240
~394
395
390
442
439
412
410
410
415

Spectr. Temp. ..... Dome Temp./Hum. -5.7°C/63.7% Transparency Conditions ..... Clear ..... 156 ....

Focus .....6.93.....

Spectr. Temp. ..... Dome Temp./Hum. .....

480 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
302				CASI CCD1	1800 L-5530	300 μ	λ=5880		Hdy.		
~300											
~260											
394											
395											
390											
1442											
429											
442									Hdy		
460											
440											
425											

157
#6

Date ..JAN.19/20..93.... Observers ..Fbr./Hdy.(24")....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
731	BD+182307	095612	175327	021157					140	405
732	"	"	"	021906					"	408
733	"	"	"	022614					"	420
734	"	"	"	023323					"	430
735	Bias (10)									
736	Comp							Fe Ar Lamp	60	
737	Flat							Tungsten Diff.	85	
738	BD+182307	095612	175327	024511					140	430
739	"	"	"	025219					"	719
740	"	"	"	025928					"	395
741	"	"	"	030637					"	345
742	"	"	"	~~032154~~	031346				"	325
743	"	"	"	~~032853~~	032054				"	310
744	"	"	"	~~033512~~	032803				"	
745	"	"	"	033512					"	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Clear ..... tss ..

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

480 0 50 1024 41 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
405											
408											
420											
430											
430										Dome T: -5.5°C / Hum: 66.8%	
419											
385											
385											
325											
310											

154
7

Emulsion Batches:
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.....

Date ...JAN 17/20.-77. Observers ...Fbr/Hdy (24")

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
746	Bias (4)								
747	Comp							Fdr. Len	60s
748	Flat								
749	BD+182307	095612	175327	035004					
750	"			035712					
751	"			040421					
752	"			041130					
753	"			041838					
754	"			042547					
755	"			043256					
756	"			044004	(NO STAR - TOPPING UP)				
757	Bias (4)								
758	Comp							Fdr Len TUNG	60s
759	Flat							Δ=½	8s

Spectr. Temp. ..... Dome Temp./Hum. -5.2°C / 69.2% Transparency Conditions ..... Clear ..... 160.

Focus 6.93 (0347)

Spectr. Temp. ..... Dome Temp./Hum. .....

4180 0 50 1024 41 ccd fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										MAX = 11.4 K	
265									Hdy		
271											
288											
305											
307										T = -5.2°C / Hum: 71.5%	
315										CCD T: [redacted] -92.6°	
→ Topping Up											
→ Topping Up										HAO to Top-up CCD	
										To Get To -100.0°C	

#8161

Emulsion Batches:

Date ... JAN 19/20-93 ... Observers ... Fbr./Hdy (24")

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
760	BD+18 2307	095612	175327	045724						339
761	"	"	"	050433						323
762	"	"	"	051142						340
763	"	"	"	051851						370
764	"	"	"	052601						
765	"	"	"	053310						740
766	"	"	"	054019						355
767	"	"	"	054727						369
768	Bias (10)									
769	Comp							FLA-Clear	60.	
770	FLAT							TUNG A-1/4	85	
771	BD+18 2307	095612	175327	055839						313
772	"	"	"	060545						324
773	"	"	"	061247						300
[illegible]	[illegible]	[illegible]	[illegible]							

Spectr. Temp. ..... Dome Temp./Hum. -5.1°C/72.3% Transparency Conditions ..... CLEAR 162

Focus .... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

480 050 1024 41 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
339				CASS CCD	1800 α=5570	200 μ	λ=5880		Hdy	CCD T= -100.0°C	
323										T= -5.0°C / H= 72.6%	
340											
370											
740	⇒	SUM OF TWO								T= -5.1°C / Hum= 73.9%	
355											
369											
										T= -5.2°C / H_{IN} = 74.7% H_{OUT} = 92%	
313											
324											
300											

163
#9

Date JAN 19/20-93 Observers Fbr./Hdy. (24")

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11774	BIAS (4)								
775	Comp							FeAr Cle	60s
776	FLAT							TUNL λ=1/2	10s
777	HD87901	10 03 03	12 27 22	06 25 50					
778	"	"	"						
779	Comp							FeAr Cle	60
780	~~F20~~ FLAT							TUNL λ=1/2	10s
781	FLAT							"	"
782	FLAT							"	"
783	BIAS (4)								

Spectr. Temp
Focus ....(
Spectr. Temp

Exp Mtr
30K
35K

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... CLEAR ..... 164...

Focus .... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 480 050 1024 41 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G: 5530	300 μ	λ = 5880				
30 K									TECHNIC SIG.	TRACKING	
35 K										H_{TN} = 75%	
										TELESCOPE ALMOST	
										ON PLATFORM.	

165
#1

Emulsion Batches:

Date 1993 Jan 20/21 Observers Hdy/Fbr/Tn

TIME on CS386, Data Ayatsition PC set Right ton to WWV Time.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 11784 5	FOCUS TEST DONE REVERSED					5h 40m E	+53°	FeAr Clear	60s 60s
11786	BIAS (4)								
7	COMP							FeAr Clear	60s
788	Nova Cyg 92	20h 27m 43s	+52° 17m 39s	18 31 08					120s
789	"	"	"	18 33 42					300s
790	"	"	"	18 39 42					537s
1	COMP							FeAr Clear	60s
2	BIAS(4)								
793	Nova Cyg 92	20 27 43	+52 17 39	18 53 47		6 21W			1780
794	Comp							FeAr Clear	60s
795 797	FLATS x3					6 25W	+52 38	TUNG A=1/2	8sec
798	BIAS(4)			19 17 01					
FM00477(A-F)	HD19279	03 0056	+46 55 21	19 25				"N" mode	
799	COMP								
800	HD87901	10 03 03	+12 27 22	203949					111s

Spectr. Temp. -1.7 Dome Temp./Hum. -1.7 / 66.8% Transparency Conditions ..slightly hazy.. 166

Focus ..6.89.. Telencadax no annulized on HR 417 1993.5

Spectr. Temp. ..... Dome Temp./Hum. ..... FadsON 90CCGain CCD = -100C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 G=6020	300M				stellar usl Redshifted ::	ok
49	3"							~~4ci~~		DONE REVERSED	
110								4ci		380 AD4	
173								4ci		SOME PERIODS OF CIRRUS 560 AD4	
										Dome T = -1.9C	
248								5ci		MAX = 1300 ADU/pixel	
								6ci			
								7ci		12.7K AD4 MAX	
									Topup Finished @ 19:38		
Ints 4x67ms + 2x133ms		V 6.4	A3Vm	RA GEAR FIXING	[Last night of good High Pressure Area]				Seeing Test	Dome WN West v light West SW Breeze	
31300								8ci	Telluric	X=5.1 8732 4.9	

167
#2

Hdy ⇒ 19"/24"

Date 1993 JAN 20/21 Observers Hdy./Tn./Ebr.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
CC11801	HD87901	10 0303	+22722	204718					14sec	35,000
802	Comp							FeAr Clear	60s	
803,4,5	Fx1 x 3 REGULUS FLATS							TUNG A=1/2	10s	
806	Bias(4)									
807	Comp BD+18°2307 COMP							FeAr Clear	60sec	
808	BD+18 2307	095612	+17 5327	20 5712					40s	320
809	"	"	"	21 04 21					"	330
810	"	"	"	21 11 31					"	340
811	"	095612	17 5327	21 1841					"	360
812	Comp							FeAr Clear	60s	
813	BD+18 2307			213301					40s	296
814	"			214011						327
815	"			214720						335
816	"			215428						360

Spectr. Temp. ..... Dome Temp./Hum. −2.6°C ... 66%H Transparency Conditions ... S.I. Hazy 168

Focus ... 6.89 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CLIMEDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
33,000				CASS CCD	1800 l/mm	300μ Full Length	6563Å	9c:	Telluric Std		
								~~10c:~~			
								11c:			
										Dome T = −2.7°C	
	~~2"~~							10 —			
220	3"							11c:	Hdy-pgm	Batch of 4 [AIRMASS 3.00]	
230											
240											
260								11c:			
								12c: —			
296								13c:	Hdy.	T_{Dome} = −3.0°C / H = 66%	
327											
325											
360											

169
Pg #3

Emulsion Batches:
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Date ..93.-.Jan.20/21... Observers ..Hdy./.Tn./.Fbr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mir
817	BD+18 2307	095612	175327	220136					40s	369
818	"			220845						340
819	"			221554						376
820	"			222302						408
821	Bias (4)									
822	Comp							Fbr Clear	60s	
823	Flat							Tung. Amber	10s.	
824	BD+18 2307	095612	175327	~~22~~3440					40s	397
825	"			~~22 4148~~					"	455
826	"			22 4857					"	485
827	"			22 5614					"	430
828	"			23 0346					40s	350
29	"			23 1054					"	370
30	"			23 1802		0252E			"	360
31	"			23 2511					"	350
32	Bias (4)									

Spectr. Temp. ..... Dome Temp./Hum. -3.2°C/66% Transparency Conditions ..... Clear w/ Haze 170

Focus 6.89 (2200)

Spectr. Temp. ..... Dome Temp./Hum. -4.5°C 72% 480 0 50 1024 41 ccdfont

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
369				CASS CCD	1800 G=6020	300 μ	λ=663		Hdy		
340										Airmass: 1.78/1.67 6%	
376											
408											
								14 —			
								15			
397								16ci			
455											
485	2"-3"										
430								16ci			
380								17ci		STHR4005.BAT for 410 sec Exts	
370											
360											
350								17ci			
								1ci			

17 pg #4

Emulsion Batches:

Date 1993 JAN 20/21 Observers Hdg J.Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc 11833	FLAT							TUNG A=1/2	8 sec	
11834	Comp							FeAr Clear	60s	
835	BD+18 2307	09 56 12	17 53 27	23 39 07		02 30E			410s	340
836				23 46 15					"	340
837				23 53 24					"	300
838				00 00 33					"	240
839				00 08 03					"	270
40				00 15 12					"	270
41				00 22 20					"	274
42				00 29 29		01 39E			"	240
43	BIAS(4)			00 38						
45	Comp							Fe Ar Clear	60 sec	
~~44~~	FLAT							TUNG A=1/2	7 sec	
46	BD+18 2307	09 56 12	+17 53 27	00 44 39					410s	350
47	"			00 51 48					"	290
48	"			00 58 57					"	290

Spectr. Temp. ..... Dome Temp./Hum. -1.5°C Transparency Conditions ...incr. Haze / cloud 17h

Focus ...6.89..... @ 00 EST

Spectr. Temp. ..... Dome Temp./Hum. ..... Air Pressure 1023-4 Hpascals ↓

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm 300μ G=6020 Full Length		6563Å	18ci		MAX = 13 K ADU/pixel	
								19ci —		Comp checked (looks good)	
340	3"							20ci	Hdy pgm	STAR400S.BHT Repeat + 4	
340								"		1.34 AIR MASS	
300								"			
240								20ci			
270								21ci		45/1 S/N	
270										some cloud now, here	
274										≥ 500 ADU sum AVG above Background. ⇒ 2000 photons	
260								21ci		only thin cloud so far	
								1ci		Dome T = -5.0°C	
								22ci —			
								23ci		13K ADU MAX	
250	2-3"							24ci	Hdy star		
290								"			
280								"			

173
pg#5

Emulsion Batches:

Date 1993 JAN 20/21 Observers Hdy. I.T.n

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
cc11849	BD+18 2307	09 56 12	+17 53 27	01 06 06		01 03 E			410s	275
50				01 14 03					"	280
51				01 21 12					"	280
52				01 28 20					"	285
53				01 35 42					413s	260
54	BIAS(4)									
55	FLAT							TUNG H=½	7sec	
56	Comp							FEAR Clear	60s	
57	BD +18 2307	09 56 12	+17 53 27	01 46 57					410s	256
58	"			01 54 06					"	245
59	"			02 01 14					"	236
60	"			02 08 23					"	226
61	"			02 15 48					"	201
62	"			02 22 56					"	197
63	"			02 30 17					"	215
64	"			02 37 26					"	235

Spectr. Temp. ..... Dome Temp./Hum. −4.8°C 77% Transparency Conditions Sl. cloudy 174

Focus 6.89

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
275								24c;	Holy pgm		
280								24i		Ha em on Red side of Ha ABS max	
280										In CR cloud again [uniform]	
285	2-3"							24c;			
260								25c;			
								1c;		Dome T = −4.8°C	
								26c;		14.2 K 404 max	
								27c;			
256	2"							28c;			
245											
236											
216								28c;			
201								29c;			
197											
215											
235											

a 175
pg #6

Date 1993 Jan. 20/21 Observers Hdy/Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
11865	BIAS(4)								
66	COMP							FeAr Clear	60s
67	FLAT							Tung A=1/2	7s
68	BD +18° 2307	09 56 12	+17 53 27	02 50 45					410s
69	"			02 57 54					"
70	"			03 05 03					"
71	"			03 12 11					"
72	"			03 19 40		1h 10m W			"
73	"			03 28 49					"
74	"			03 33 56					"
75	"			03 41 07					"
76	BIAS(4)								
77	FLAT							Tung A=1/2	7s
78	COMP							FeAr Clear	60s
79	BD +18°2307	09 56 12	+17 53 27	03 52 14					410s

Spectr. Ten
Focus .....
Spectr. Ten

Exp Mtr
1398
146
170
201
189
201
250
228
170
180

Spectr. Temp. ..... Dome Temp./Hum. -4.9°C/81.9% Transparency Conditions THICK HAZE ..... some clearing .1.6.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 84.4%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										RESET SPECTROGRAPH CONTROLLER	
13198								30c;			
								31c;		12.6 K	
146								32c;			
170										thick cloud now	
201											
189								32c;		X=1.14	
201								33c;			
250										Less fuzzy now	
228											
170								33c;			
								34c;		13.3 K	
								35c;			
166								36c;			

177
#7

Date 1973 Jan 20/21 Observers Hdy/Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
11880	BD +18°2307			03 59 23					40s
1	"			04 06 44					"
2	"			04 13 53					"
3	BI4S(4)								
4	Comp							FeAr Clear	60s
5	FLAT							Tung A=1/2	7s

Spectr. Ten
Focus.....
Spectr. Ten

Exp Mtr.
193
188
197

Spectr. Temp. ..... Dome Temp./Hum. -5.1 / 84.6% Transparency Conditions ... cloudy ... 128.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -5.3 / 86.0% CCDT = -100.5°C a tend

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
193								36ci			
188											
197											
								3ci			
								6ci		13/18 ADU	
						All	to Perseus c worm.				

179 pg#1 Mon-Tues

Date 1993 JAN 25/26.. Observers [Meylan=Mln]/[KK]/Fbr/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
ce05340	BIAS(4)			~~18~~ 17						
41 42	Focus Test	inboard/outboard		≈1835		≈3W	≈+30°		3/3	
5343	Bias(4)									
44 → 48	FLATS x5	at HD10307 posn						ThAr	4sec	
5349	Comp							ThAr	6sec	
5350	HD10307	0135 42	42 07	190444				[redacted]	2400s	561
5351	"	"	"	194515		02 47W			2400s	978
5352	Comp							ThAr	6sec	
5353	HD10307	013542	4207	202739					2400	848
5354	Comp							ThAr	6 sec	
5355	Bias(4)									
5356 - 5360	FLAT x5							THAR	6secs	
5361	Comp	03 31 48	00 05	~~21 21 01~~				ThAr	6sec	
5362	HD22484	033148	00 05	212101					850	340
5363	Comp							ThAr	6s	~~340~~

Spectr. Temp. ..... Dome Temp./Hum. -4.8°C 52% Transparency Conditions ... P.A.T. cloudy ..... 180.

Focus ..... 0.225 ... probable for -6 → -7°C

Spectr. Temp. ..... Dome Temp./Hum. ..... 90 CCD Gain CCD T → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm X-grating				CCDFMT	0 0 256 1024 4 1	
							5180Å		Focus Test	0 0 64 1024 16 1	
								1ci		outboard 2.3 pixel Red	
						width 60μ = .277 set				0 0 256 1024 4 1 CCDFMT	
						Height 800μ = .185 set		3ci		12.3K MAX	
						60μ 600μ = .205 set					
561		V 5.0	G2V					5ci	Median/For	Airmass = 1.05 / Thick Cloud	
978		"	"					6ci	"	Clear Now	
828	2"-3"							5ci	Median/For	T = -6.1°C Hum = 53%	
					W = 60μ H = 800μ = .185					12.9K MAX.	
		V 4.29 ↓	F8V ↓		H = 600μ						
340								5ci	KK Std/Vel		
~~340~~											

181 pg #2 Mon - Tues

Date 93 - JAN 25/26 Observers M.Ew/K.K./F.Br/J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce 05364	Comp for Capella								6
65	HD34029	05 09 18	+45 54	21 41 37					218s
66	Comp								6
67	HD34029			21 51 57					198
68	Comp								6
69	BIAS (4)			21 58					
70 74	FLATS x5			22 07		01 37E	+46°		5sec
5375	Comp								6 sec
NO WRITE	HD71148	08 20 42	+4600	22 17 14	(ABORTED - TOO CLOUDY)				1750
5376	Bias (4)								
5378	BIAS(4) 340 0 140 10 24 11			CODENT Dome T=-6.4		8E	+45°		
5377	Comp (Start of Flexure Tests)			01 11		8E		Th Ar	30s
79	"			01 13 15		7E		"	"
80	"			01 15		6E		"	"
81	"			01 17		5E		"	"
82	"			01 20 29		4E		"	"

Spectr. Temp. ..... Dome Temp./Hum. −7.0°C 58% Transparency Conditions ..Cloudy..mostly.....

Focus .....0..2.5.....

Spectr. Temp. ..... Dome Temp./Hum. −6.4°C 65%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD				4ci			
3900							5180Å	6ci	kk pgm	MAX = 124 ADU/pixel	
								4ci			
4000								7c.	kk pgm	Cloud some times	
										Dome T = −7.1°C	
					H-	800u = .145		3ci			
					H=	600u = .205		4ci			
102		V 6.32	G5 V					5ci		Thick Cloud H: 62.9% T: -7.5	
									Dome Closed Since 23:30 CST		
								1ci			
						60u 600u		1ci			
								3ci			
								2ci			
								4ci			
								5ci			

183 pg 3

Date 1993 JAN 25/26 Observers Th. J. F. H.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE05383	Comp for 45° Dec Flexure continued.			01 27 37		3 E	+45°	ThAr	30s
84						2 E			
85				01 27		1 E			
86						0			
87						1 W			
88						2 W			
89						3 W			
90						4 W			
91					≈0140	5 W			
92	Bias								

Spectr. Temp. ..... Dome Temp./Hum. ~69°C 65% Transparency Conditions ..... Cloudy 184

Focus ... 1225 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Edek CCD	600 l/mm x grating	600μ	5180Å	6ci	Flexure Test		
								~~7ci~~			
								7ci			
								8ci			
								9ci			
								10ci			
								3ci			
								4ci			
								5ci			

Emulsion Batches: .....

Date ...Jan. 27/28-93.... Observers ..For. (Sc. Phoenix In.) .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
ceo5392	Bias (4)									
5393	Comp							ThAr	6s	
5394	HD22484	03 31 48	00 05	08 50	0130W				1050	355
5395	Comp							ThAr	6s	
5396	Bias (4)									
5397 – 5401	Flat x 5							Tung	5s	
5402	Comp							ThAr	6s	
5403	HD71148	08 20 42	46 00	19 47 06					3100s	355
5404	HD71148	"	"	20 39 41	235 E				3600s	310
~~5405~~	~~HD71148~~	~~"~~	~~"~~	~~21 40 54~~					~~3600s~~	
5406	Comp							ThAr	6s	
5406 – 5410	Flats x 5							Tung	4s	
5411	Bias (4)									

Spectr. Temp. ..... Dome Temp./Hum. -4.6°C/62.1% Transparency Conditions ....PARTLY CLOUDY.....166.

Focus .....0.225.....

Spectr. Temp. ..... Dome Temp./Hum. -7.9°C/64.5%(2200) FANS OFF - ccd T: -100.1°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				ECHELLE CCD	600ln/mm	600μ	λ_c 5180Å		Echelle Tilt =1405	0 0 256 1024 41 ccdfmt	
										SNOW EARLIER	
355		V 4.28	F8V				W=60(.279) H=600(.205)		KK STD.	PASSING CLOUD	
							W=60μ H=800μ(.185)			~12.3K MAX	
							W=60μ			DOME T=-6.2°C / H=61.4%	
255		V 6.32	G5V				H=600μ		Mln/Fbr	SKY HAZY	
310		V 6.32	G5V						Mln/Fbr	POOR SEEING	
		"	"							386 CRASH - LOST LAST	
										PICTURE OF 71148	
										11.7 MAX	
										CLOUD / SOME SNOW	
						ΔEL to Perseus			} WORM	H_{in}=70% H_{out}=59%	

187 Fri - Sat

Date 1993 JAN 29/30. Observers [KK] ... In. / Fbr. ...

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE05412	BIAS(4)			19 05			+40°		
413	Comp			19 16				ThAr	45e
414	HD8890	01 22.6	+88 46	19 18 21					455
415	"	"	"	19 26 39					447s
416	Comp			19 35				ThAr	45
417	Comp							"	"
418	HD34029	05 09 18	45 54	19 42 18					109s
419	"	"	"	19 45 06					131
420	Comp							ThAr	46
421	Bias(4)								
422	Comp							ThAr	45
423	HD22484	03 31 48	00 05	19 56 25					1528
424	Comp							ThAr	45
425	~~Flats~~ Bias(4)							~~ThAr~~	
426 – 430	Flats x5					01 10W	+27°		

Spectr. Temp. ..... Dome Temp./Hum. -8°C 57% Transparency Conditions PART cloudy ..... 1.88.

Focus ...: 225 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Echelle CCHmBDH 90<GAIN CCDT -> -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm 18.00	60u 60u	5200Å			x grating .3985	
								3c:			
1325	5"	2	A					4c:	KK pgm	ADU for 5 cds 13K Σ Avg above blank	
1330								5c:			
								6c:			
2800									KK pgm	65K max ADU	
3470									"		
										Dewar T = -8.6°C	
571		V 4.28	F8V					4c:	KK Std. Vis.	1K ADU Above Bkg.	

189
Pg #2

Date 1993 JAN 29/30... Observers [K/C] Tn / Fbr.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceO5431	Comp							ThAr	4s
432	HD 47105	06 31.9 ~~06 29.0~~	+16 29	22 36 59					484
433	Comp							ThAr	4s
			FLEXURE TESTS		FORMAT 0	560 [illegible]	160 [illegible] 102	4 11	
434	BIAS (4)					10 E	+88°	~~ThAr~~	
435	Comp Flexure Tests, Draw Polaris Dec				00 02.	10 E		ThAr	60s
436	Comp			00 04 24		9 E	.26 .14	"	"
437	Comp			07		8 E	.30 .24	"	"
438	Comp					7 E	.07 .11	"	"
439	Comp			00 11 25		6 E	-.30 -.21	"	"
440	Comp					[illegible]5E	-.81 -.49	"	"
441	Comp			00 20		4E	-1.40 -.99	"	"
442	Comp					3E	-2.10 -1.61	"	"
443	Comp					2E	-2.86 -2.11	"	"
444/445	Comp/Comp			00 26 00 28		1E/0	-3.60 -2.73 -4.20 -2.79	"/"	"/"

Spectr. Ter
Focus.....
Spectr. Ter
Exp. Mtr.
1259

Spectr. Temp. ..... Dome Temp./Hum. -8.7°C / 59.3% Transparency Conditions ..... Grounding in 190..

Focus ..... 0.225 .....

Spectr. Temp. ..... Dome Temp./Hum. -7.3°C 61.7% Perso closed for tests

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm Ech	60 600	5200Å				
1289	3"-4"	B 1.9	AOIV					7ci	KKpym	MAX 6K ADU	
								5ci	KKpym		
										340 ò 140 1034 1 1	
Note Tel at 88° on or Beyond 90° sec:						Tel eastside of Piers.		1ci			
								3ci			
								4ci			
								5ci			
								6ci			
								7ci			
								8ci			
								9ci			
								10ci			
								11ci			
								12ci / 2ci		All to Perseus SW ORN	

191

[redacted] 1993 JAN 30/31 SAT SUN

Date [redacted] Observers [redacted] Tn

Emulsion Batches:

Den. Tel movement (Telescope)

Echelle Stability Tests

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~54~~ 46 ~~54~~ 47	Focus	~~IN BOARD~~ / ~~OUTBOARD~~	OUTBOARD	18 18		≈03 30W	+16°	ThAr	3/3
~~54~~ 48	BIAS (4) for Test Fmt		South side of 90° Dec	00 00		+88 50			
49	Comp Nothing moved, including dome			183512		0 0	+88 50	ThAr	30s
50	Comp			20 12 ~~42~~		-.20 -.18	+	ThAr	30s
51	Comp			20 32 ~~50~~		-.22 -.18			
52	Comp			21 31 16		-.28 -.24			
53	"			22 35 29		-.37 -.20			
54	"			23 26 40		-.45 -.16			
55	BIAS (4)			23 32		~~-.51 -.14~~			
56	Comp			23 55 32		-.51 -.14		ThAr	30s
57	"			00 46 55		-.52 -.10			
58	"			01 36 33		-.51 -.08			
59	"			02 22 ~~14~~		-.63 .02			
60	"			02 33 44		-.65 .06			
61	BIAS (4)			02 38 33					
62									
63	Focus Test.	IN/OUT		02 49					37

Spectr. Temp. ..... Dome Temp./Hum. -8.7°C 60%H at 18EST Transparency Conditions Cloudy... snow ..... 190..

Focus ... 01225 ... unchanged Dome closed of course

Spectr. Temp. ..... Dome Temp./Hum. -8.0 71.7%H Bar Pressure going down. Temp expected to rise to -3 by dawn

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks CCD FMT FOR FOCUS	Quality
Topup done by 1815				Echelle CCD	600 l/mm CROSS	60μ W 600μ H	5200Å		Focus Test	0 0 128 1024 8 1 CCDT → -100°C	OUTVD pixelled
				180 Tilt	.3985 HA			~~1ci~~	Test FMT →	560 0 160 1024 11	CCDFMT
(Encoder Temps Recorded Also)					(TIC = -105 @ 18EST)			3ci		-9.0°C	
								~~4ci~~		Dome T -9.2 → -9.3	
								~~5ci~~		Dome T = -9.3°C, 62.4%H	
								6ci		-9.2 - -9.3 64.8%	
								7ci		-9.1°C → -9.3 66%H	
								8ci		Dome T = -9.0°C 66%H	
								1ci	Air pressure	104 kps and dropping	
								9ci		Dome T = -8.8°C	
								10ci		-8.6°C	
								11ci		-8.4 - -8.5°C mechanical temperatures	
								12ci		-8.1 - -8.2°C	
								2ci		-8.0	
								1ci			
	~~HH 140~~			SAME Posn as Tests				1ci 2ci		T -7.9 Focus position same as 1st set	

format actually 180 x 1024

change in midstream must have fouled the headers

193
P1 Mon-Tues [HK][Meglan] SENIICO OBS

Date 1993 - FEB 1/2 Observers To/FDr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce 5464 65	FocusTest	INBOARD/OUTBOARD		17 40		03 W	+27°	ThAr	3/3
05466	Bias (4)								
5467	Comp							ThAr	6s
5468	HD 8890	01 22.6	+88 46	18 1234					659s
5469	Comp							ThAr	6s
70	HD 8890	0122.6	+8846	182756					587*
71	Comp							ThAr	6s
72	Comp							ThAr	6s.
73	HD 22484	03 31 48	+0005	184855					1444
74	Comp				Tel West Side			ThAr	6s
75	HD 22 484	033148		191754					1607
76	Comp							ThAr	6s,
77	BIAS(4)								
5478 - 5482	FLAT x5					01 W	+14°	TUNG	5s
5483	Comp							ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. -12.5°C ... 57.5%H Transparency Conditions .. FINE 154

Focus ... .225 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90 CGAin CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm x grating	60 u 600 u	5200Å			Outboard Col pixel Rel	
				18.00°	.3985°			1Ci		0 0 256 1024 4 1 ccdfmt	
								3Ci			
1316	poor	2	F					4Ci	k.k pgm	5Ft max Tel East SIDE	
								5Ci			
1300								2Ci	k.k pgm	* image focus better	
								3Ci			
								3Ci			
500	5"	V 428	F8V	(F9 III-V)				~~Ci~~	Std/vel k.k		
								3Ci			
600								5Ci	Std/vel		
								3Ci			
C								1Ci		Dome T = -14.2°C	
						600 u width 80 line H 60 u 600 u					

195
p2

Date 93 - Feb 1/2 Observers [KK] [MIn] Fo / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
ce 05484	HD71148	08 20 42	+46 00	20 15 08	(386 Crasn)				~~3~~ ~~60~~ ?	?
5485	"	"	"	204603					3600	360
5486	Comp			21 47				ThAr	6 sec	
5487	HD71148	08 20 42	+46 00	21 48 58					3602	332
5488	Comp							TWAr	6s	
5489	HD71148	08 20 42	+46 00	225123					3601	312
5490	Comp							ThAr	6s	
5491	Bias (4)								0	
5492	HD71148	08 20 42	+46 00	23 54 59						323
5493	Comp							ThAr	6 sec	
5494	HD71148	08 20 42	+46 00	00 57 05		02 03W			3602	396
5495	Comp							ThAr	6 sec	
→ 5496	HD71148	08 20 42	+46 00	01 59 27		03 06W			3600	400
5497	Comp							TWAr	6s	
5498 - 5502	FLATx5					03 10W	+46°	TWAr		

Spectr. Temp. ..... Dome Temp./Hum. +15°C ..... 55% H Transparency Conditions . Fine - S.I. 4.92g ..... 196 ..

Focus ..... 0 22.5 .....

Spectr. Temp. ..... Dome Temp./Hum. -17.4°C ..... 55.2% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
?	2"-4"	V 6.32	G5V	ECHELLE CCD	600 l/mm 18°	60μ 600μH	λ_c = 5200	5ci	M1n	½ Moon Above (2K ΣAVG above Bkgnd (4K ΣAVG above bkgnd)	
360	~~2-4"~~			x-grating .3985				6ci	"	Hum = 52.1% T: -15°C	139/1
	3"							3ci			
332	3"							7ci			
								3ci			
312	3"-4"							4ci			
								3ci			
										-16.3°C Dome T	
323	3"							~~5~~ 6		126 128 pixels	
								2ci			
390	<3"							4ci		1701 S/N 7K ΣAVG 100 above bkgnd.	
								1ci			
400								7ci		Hum = 54 3% T = -17.2°C	
						60μ 800μH					

197
3 Mon-Tues

Date 1993 Feb 1/2 ... Observers [K.A.] [M.L.] Tu/Fr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE05503	Bias(4)								
504	Comp							ThAr	6s
505	HD8890	01 27 6	+8846	031646		W			448
506	Comp							ThAr	6s
507	HD8890			032627					
508	Comp							ThAr	6s
509	Comp							ThAr	6s
510	HD99028	11 1842	+1105	034547					1208
511	Comp							ThAr	6s
512	HD99028	11 1842	11 05	040730					1194
513	Comp							ThAr	6s
514	COMP								
515	HD102870	11 45 30	0220	043334.					164
516	Comp							ThAr	6sec
517	Bias(4)								

Spectr. Temp. ..... Dome Temp./Hum. -1.7°C ... 55% Transparency Conditions .. Fine 190

Focus .. 1225 ..... not Windy anymore anyway

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. 18:00 tilt	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD			5200Å				
						60u 600μ/M		3ci			
1757	3"	2	F2					2ci	H-K pgm		
								3ci			
1760		0	F2					4ci			
								3ci			
								3ci			
865	4"	V 4 03	F2 IV					4ci	H-K pgm	i Leo	
								3ci			
885		V 3 01	F9 V						Stg Det	i Leo	
1700		V 3:61	F9 V					4ci	STD. VEL.		
								3ci			

199
pg#1 Tues-Wed

Date 1993 Feb 2/3 Observers [KK] TH

Emulsion Batches:

CS538 Time Right on WWV Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05518	BIAS(4)			18 18					
19	Comp							ThAr	6s
20	HD8890	01 22.6	+88 46	18 2098		00 49 W			334
21	Comp							ThAr	6s
22	HD8890	01 22.6	+8846	18 ~~2234~~					344
23	Comp							ThAr	6sec
24	Comp							"	"
25	HD22484	03 31 48	+00 05	18 5234		00 20 W			1660s
26	Comp							ThAr	6sec
27	HD22484	03 31 48	+00 05	19 2237					1399
28	Comp							ThAr	6sec
29	Comp							ThAr	6sec
30	HD 3712	00 34 48	+55 59	19 5942			Tel still East of Pier		336
31	Comp							ThAr	6sec
32	BIAS(4)					04 W	+56 30		

Spectr. Temp. ..... Dome Temp./Hum. -8.0°C 68% Transparency Conditions ... Clear ... 200.

Focus ... .225 .....

Spectr. Temp. ..... Dome Temp./Hum. -6.7°C 72% T-up by 1800 Finished 90CGAin CCDT -> -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle 18.00	600 l/mm .3985 cross	60u 600u	5200Å	1c;	HR399 used	for Tel normalization	
								~~3c;~~			
1660	3"	2	F					2c;	kk pgm	Tel East Side	
								3c;			
1666	3"-4"							4c;	kk pgm	some cloud in area	
								~~1c;~~			
								~~1c;~~			
597	3"-5"	v 4.28	F8V					5c;	std vel kk	Tel east side	
								1c;			
570	4"	v 4.25	F8V					5c;	std vel kk		
								3c;			
								3c;			
1466	3"	v 2.23	K0III a					6c;	std vel		
								7c;			
								1c;			

29 pg #2 Tues-Wed cont.

Date 1993 Feb 2/3 Observers [KH] Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05533	Comp							ThAr	6s
34	HD5890	01 22.6	+88 46	201349					547
35	Comp							ThAr	6s
36	HD8890			202528					500
ce05~~43~~ 5537	Comp	written after Flats				~~Telescope~~		ThAr	6s
→ 5542	FLATS x 6			20 45		01 E	+65°	Tung	45s
5544	BIAS(4)			20 53		03 E	"		
45	Comp							ThAr	6s
46	HD 72905	08 30 18	+65 22	205937					2400
47	Comp							ThAr	6s
48	HD 72905	08 30 18	+65 22	215150		01 22E			2901
49	Comp							ThAr	6s
50	HD 72905			224228		0033E			
51	Comp							ThAr	6s
52	HD 72905			233346					
53	Comp							ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. -7.1°C ..... 73% Transparency Conditions ..Fine - s/cloudy 20z

Focus ..1225.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle 18:00	600 l/mm x grating	60µ 600µH	5200A	3ci			
2500	3"	2	F					2ci	KKpgm		
								3ci			
2450								4ci	K/K pgm		
								7ci			
						60µ 800µ Height		3ci	Tel/west side low	MAX 1147 K ADU/pixel	
								1ci		Dome T = -7.2°C	
						60µ width 600µ H		3ci			
360	3-4"6"	5.64 ✓	G2V					~~4ci~~	M/n pgm	6K ADU Σ Hyg of 10 cols Some cloud	
								2ci			
320	3-4"							3ci	M/n pgm	Some cloud patches	
								7ci			
350								4ci	M/n pgm		
								3ci			
115								3ci		Cloud	

203
pg#3 Tues - Wed

Date 1993 Feb 2/3 Observers [K.A.] T.n

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05554	Comp							ThAr	6s
55	HD8890			00 1146					1209s
56	Comp							ThAr	6s
57	HD8890			003558					1400
58	Comp							ThAr	6s
59	BIAS(4)								
60 62	FLATS x3					2 W	+2°	THG	5se

Spectr. Ter
Focus....
Spectr. Ter

Exp Mtr
485
490

Spectr. Temp. ..... Dome Temp./Hum. -6.3°C 70%H Transparency Conditions ... cloudiness ... 2.04

Focus ... .225 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.4°C 69%H 90CGAin getting gusty from SW

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD		60μ 600μ	52009	3c;			
485	4"	2	F					4c;	KK pgm	Cloud	
								5c;			
400								6c;	KK pgm		
								7c;			
								1c;		MAX = 14 K ADU/pixel	

205

Wed - Thurs

Date 1993 Feb 3/4 ..... Observers ..[KH]...T.N.....

Emulsion Batches:

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CS5386 Time only 3 secs ahead of W.W.V. Time. Not changed

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05563	BIAS(4)								
64	Comp							ThAr	65sec
65	HD8890	01 22.6	+88 46	21 45 35					477s
66	Comp							ThAr	6sec
67	HD8890	01 22.6	+88 46	21 55 07		04 29W			317
68	Comp							ThAr	6sec
69	Comp (Tel	EAST SIDE STILL)						"	"
70	HD27484	03 31 48	+00 05	22 12 56		03 41W			1496
71	Comp							ThAr	6sec
→ 72 76	FLATS x5	(Tel in same config as Polaris Exps)				5 16W	+89°	TUNG	4sec
ce05577	BIAS(4)								
78 79	Focus Test	inboard/outboard		≈ 00 20		≈3 W	≈+~~30~~ 0	ThAr	3/3
	Feb 4								
80	Focus test	- OUT						ThAr	~~6~~
81		- IN							8

Spectr. Temp. ..... Dome Temp./Hum. 0°C ... 67% Transparency Conditions ... Mostly Cloudy ... 20%

Focus ... *.225 .....

Spectr. Temp. ..... Dome Temp./Hum. -1.5°C ... 67% Primary mirror still half frosted over.

90CGAIN CCDT => +100° by 2130 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle 18.00 tilt	600 l/mm .3985	60μ 600μ H	5200Å	1ci	*Note: No chance to change or check focus. It's same set as for previous very cold nights. Comps look OK Thought.		
								3ci			
1320		2	F					4ce	KK pgm		
								5ci			
1330								6ci	KK pgm		
								7ci			
								2ci			
384	3"	4.28	F8V					4ci	Stilvel KK (getting some cloud & very gusty)		
								3ci	*(Cloud at end)		
						60μ 800μ		3ci		MAX = 11.8K ADU/pixel	
								1ci			
T = -1.5°C set .225						60μ W 600μ H			Focus	Out board shift: Field 7 picks Ref. : Shall use setting	
T -2.0			set	.240						right on	

207 pg #1 Thurs - Fri

Date 1993 Feb 4/5 Observers [K.K] Th/Fbr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
ce05582	BIAS(4)									
83	Comp			18 36				ThAr	6s	
84	HD8890	01 22 36	+88 46	* 18 3904	* Bulk of weak exp Between 1843 → 1852				1042	55
85	Comp							ThAr	6sec	
86	Comp			21 1631				"	6sec	
87	HD8890	01 22 36	+88 46	21 2106					450	585
88	Comp			21 2926				ThAr	6s	6
89	HD8890	01 22 36	+88 46	21 3044					553	500
90	Comp							ThAr	6s	
91	BIAS(4)									
92	Comp			21 5226				ThAr	6s	
93	HD8890	01 22 36	+88 46	21 5437		4 38W			632	1370
94	Comp			22 0536				ThAr	6s	
95	HD8890			220901					303	560
96	Comp			221515				ThAr	6s	
5597 - 5601	FLATx5					233W	+68°	Tung	4s	

Spectr. Ten
Focus ....
Spectr. Ten

Spectr. Temp. ..... adjustment Dome Temp./Hum. -1.0°C ... 64% Transparency Conditions ... Cloudy ... 200

Focus ... 240 ... Focus test done previous page

Spectr. Temp. ..... Dome Temp./Hum. -1.1°C ... 60.6%

90CGAIN CCDT -> -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle 18.00	xgrating .3985 W H	600u 600u	5200	1ci		0 0 256 1024 9 1	CCDfast
								3ci			
55		7	F					4ci	KtKpym	~~HKADU ΣADU above bkgnd~~ ie no counts clearly nothing before 1893	64/1
								~~5ci~~			
								~~5ci~~			
285								6ci	KtKpym	6 KADU ΣADU above bkgnd	
5								5ci			
500								7ci	KtKpym		
								2ci			
								1ci		DomeT = -1.0°C	
								2ci			
320								4ci	KtKpym		
								3ci			
560								6ci	KtKpym	comps Right on each other. ie. OK	
								3ci			
				TELESCOPE E S....				3ci		C-0-0	

209
P742

Date 1993 Feb 4/5 Observers [illegible]

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05602	Comp							Th,Ar	6s
03	HD3712	003448	55 59	23 2005					607
04	Comp							Th, Ar	6s
05	HD3712	003448	55 59	23325					655
06	Comp'	↑						Th Ar	9 sec
07	Comp'	↓						Th Ar	6 sec
08	HD22484	03 3148	00 05	23 5628					1195
09	Comp							Th Ar	6s
5610	Comp							Th Ar	6s
5611	HD72905	08 30 18	65 22	002957					2400
5612	Comp								
5613	HD72905	03 30 18	65 22	01 1145					2400
5614	Comp							Th Ar	6s
5615	Blank (4)								
5616	HD 72905	03 30 18	65 22	015525		2 41W			2368
5617	Comp'			023537				Th Ar	6s

Spectr. Temp. ..... Dome Temp./Hum. ..../..... Transparency Conditions ..VARIABLE. CLOUD.....210.

Focus .....9.240.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle 18.0	x grating .3985	60μ 600μ	λ_c = 5200				
885		V = 2.23	KO III a					6Ci	STD VEL		
~~1385~~								2Ci			
1385								7Ci	Stl vel		
730	Big	V 4.28	F8					4c.	Stl vel KK	some what extended THROUGH TREES!	
350	1"-2"	V 5.64	G2 V					4Ci	Mln		
373								5Ci	Mln		
										Prot = -14?	
440	2"							6Ci	MLM		
								2Ci			

21 pg #3

Date 1993. Feb. 4/5 ..... Observers [KK] [Meylan] ... Fbr./Ty

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05618	HD72905	08 30 18	+65 22	023724					~~30~~ 2400
5619	Comp							ThAr	6s
5620	Bias (4)								
21	~~HD~~ HD72905	083018	+65 22	032126	~~032126~~				2400
22	Comp			0402					
23	BIAS (4)								
5624 – 5628	FLAT (x5)					01 53W	+21°	TUNG	
5629	Comp							ThAr	60s
5630	HD102870	11 45 30	02 20	042005					935
~~5631~~	~~Comp~~	Lost not written						ThAr	60s
5631	Comp (for HD8890)			0451		~~0451~~		"	"
5632	HD8890	01 22.6	+88 46	045445					437
5633	Comp							ThAr	60s
5634	HD8890	01 22.6	+88 46	050324					385
5635	*							ThAr	60s
5636	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. -1.3°C 55.4% Transparency Conditions FINE - cirrus 212 coming

Focus 0.240

Spectr. Temp. ..... Dome Temp./Hum. -1.3 57.5% COLUMBIA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
307				echelle 18.00	.3985	60u 600uA	5200Å	7c;	M/y pgm		
								3c;		THIN CLOUD.	
								1c;			
420	2"							4c;	M/y pgm		
								3c;			
								1c;		Dome T = -1.3°C	
						60u 800u		4c;		Tel Still East Side	
930	2"	V 3.61	F9V					6c;	St/V@		
~~950~~								2;			
								2c;			
1500	3"	V 1.9	F					4c;	K/K pgm		
~~1500~~								.			
1531								5c;	K/K pgm		
* Note Feb16 Tm (xt On examination, Comp c0535 does have a bad shift)				This comp not valid. I think.				1c;	Original Lost	and this may have been done when at different dec	

213

Date 1993 Feb 5 Observers KK

Echelle Alignment TESTS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE05637	Hartmann - IN							ThA	8
8	Hartmann - OUT							ThA	8
5639	Beam illumination TESTS		made with 50 mm Nikon lens					ThA Tung	15
5640			+22°			3½ W		Tung	0.3
5641						"		Tung ThA	1.0
5642	prism moved to stellar position & back					"		ThA	"
5643	" " " " "			again		"		"	"
5644	moved to meridian		+22°			0h		ThA	15
5645	Red lights		+22°			3½ W		ThA	5
5646	Blue lights		+22			3½ W		ThA	30
5647	"		"			"		"	"
5648	" flat		"			"		Tung	1
5649	green flat		"			"		"	"

Spectr. Temp. ..... Dome Temp./Hum. −1.4°C Transparency Conditions ..... 2/4.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 0.0C 0 0 512 512 2 2 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle 18.00	.3985	60μ 600μ	slit pos .215			T = −1.4° F = .240	
0 cgain											
					.3300					λ = 6000Å	
					.4555					λ = 4400	
							.150				
							.150				
					.3985		.150				

215

Date ..Feb 6/7-93..... Observers ..(Blo)(Rm).Fbc.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11836-7	Focus Test								
11888	Bias(4)								
889	Comp							Fe Ar CC	60s
890	HD21699	03 25 04	+47 41	21 25 15					2727
891	Comp							Fe Ar	60s
892	Bias(4)								
893	Comp							Fe Ar CC	60s
894	HD37468	05 33 44	-01 39 28	21 06 33 [redacted]					[redacted]
895	Comp							Fe Ar CC	
896	Bias(4)								

Spectr. Te
Focus ....
Spectr. Te

Exp Mtr.

OK

OK

Spectr. Temp. ..... Dome Temp./Hum. -14.7°C / 44.6% Transparency Conditions ..... Clear ..... 216..

Focus ..... 6.98 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... FANS ON 480 0 30 1024 41 ccdCmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 G=6070	250 μ	λ_c=6610				
50K	2"-3"	V 5.48	B5 V						B1a	DIFFICULT GUIDING. BAD TELESCOPE DRIFT IN RA BAD 74" DEFI SEEING VERY POOR	
										RACK PROBLEMS!	
50K	4"	V 5.81	O9.5V						B1a	REGION MAY BE TOO BLUE. HUM=50 6% T=-15°C RA MOTION NOT WORKING	
										CLOUD	

217
P1

Date . FEB 8/9 - 93 ..... Observers ... F.br. (Bln. by phone)

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD1897	BIAS (4)								
898	Comp							FeAr clear	60s
899	HD 25642	03 59 08	+50 04 48	18 21 18		032E			812s
900	Comp							FeAr clear	60s
901	Comp							"	"
902	HD 35502	05 20 00	-02 54 22	18 48 21					2015
903	Comp							FeAr clear	60s
904-906	FLAT x3							THORN D=1½	8s
907	BIAS (4)								
908	Comp							FeAr clear	60s
909	HD 36485 (δ Ori. C)	05 26 54	-00 21 30	20 20 01					2100s
910	Comp							FeAr clear	60s
911	Comp							"	"
912	HD 87901	10 03 03	12 27 22	21 07 55					1435
913	Comp							FeAr clear	60s

Spectr. Temp. ..... Dome Temp./Hum. −7.5°C / 47.6% (1755) Transparency Conditions ..... CLEAR → HAZE. 218

Focus ..... 2.690 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

NORMALIZE ON H1012929
480 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=6075	250 μ	λ_c 6610				
45K	1"-2"	V 4.29	A0 IVn	(NOT A LOT OF LINES!)				4ci	Bln - TELLURIC	$V \sin i$ = 196 kms^{-1} A_{IR} = 1.0146	
										took SDIG frame	
5700		V 7.36	B5 IVsn					5ci	Bln (HeW)	SIGNAL TOO LOW	
										BREAK FOR SBIG TESTS.	
										CHANGE GRATINGS TO ALLOW	
		NOTE: GRATING CHANGE			1800 G=6050		λ_c 6610			MORE CONTINUUM @ H_α	
6700		V 6.85	B2 Vsn						Bln (HeS)	AIRMASS: 1.39 HUM: 63% T: ~10.4 THIN CLOUD → CLEAR → CLOUD	
										COVERAGE 6530Å − 6690Å	
85K		V 1.36	B7V						BL. TELLURK	AIRMASS = 2.05	

p2 29

Date Feb 8/9 -93 Observers Fdr (Blg. by phone)

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
914	Bias (4)								
915	Comp							Fe Ar Clear	60s
916	HD37479 (50 n.E)	05 33 45	-2 38 48	21 20 11					240s
917	Comp							Fe Ar Clear	60s
918	Bias (4)								
919	Comp							Fe Ar Clear	60s
	~~HD37479 (50 n.E)~~	~~05 33 42~~	~~-2 39 02~~						
920	HD37468	05 33 44	-02 39 28	22 09 50					45s
921	HD37468	"	"	22 18 21					640s
922	Comp							Fe Ar clear	60s
923	Bias (4)								
924	Comp							Fe Ar clear	60s
925	HD 77327	08 56 48	+47 33 08	22 42 37					35s
926	Comp							Fe Ar Clear	60s
927-931	Flat x 5							Tung $\Delta = 1/2$	10s

Spectr. Temp. ..... Dome Temp./Hum. -19.4/6.6% Transparency Conditions .... CLOUDY AT TIMES 220

Focus ..... 0.690 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

COVERAGE 6530Å → 6690Å

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ_c=6050	250 μ	λ_c=6610				
9080	2"-3"	V 6.53	B2 V_{pe}						Bln (HeS)	THROUGH CLOUD AIRMASS: 1.48 - 1.55 AT END.	
										SEEING VERY BAD	
50K	3"-4"	V 3.81	A0.5 V						Bln	ATTEMPTED SOI.C, COULD NOT GET SOI.AB OUT OF SLIT.	
60K		"	"						Bln	23 - 28 cells $\sum$ ADC = 48K	
45K		V 3.60	A1 V_n						Bln (TELLURIC)	AIRMASS = 1.06 V_{SMI} = 219 CLOUD HUM = 65.5% T = -10.6°C	

221

#3

Date Feb 8/9-93 Observers Fbr (Bln by phone)

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	
cc11932	Bias (4)									
933	Comp							FeAr Clear	60s	
934	HD112028	12 48 23	+8357	000238					3489s	40K
935	Comp							FeAr Clear	60s	
936	Bias (4)									
937-941	Flat x 5							TUNG n=Clear	45s. 7	
cc11942	Comp (λ_c=6610)									
943	HD87901	10 03 05	+12 27 22	011335					73s	95K
944	Comp							FeAr Clear	60s	
945	Comp							FeAr Clear	60s	
946	HD79158	09 07 16	+43 37 48	012244	Please Check Header For Clambda. May Read 4476 Rather Than 6610!				813s	55K
947	Comp									
948-950	Flat x 3							TUNG n=1/2	8s	
951	Bias (4)									

* Note Feb 10 93 Tn

No, The previous 4476Å Headers were wrong instead. Corrected now & Rewritten.

Spectr. Ter
Focus....
Spectr. Ter
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... PARTLY CLOUDY ... 222.

Focus ... 0.690 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

480 0 50 1024 41 format

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=4565	250 μ	λ_c=4476				
40K	≈3"	V 5.28	A2						Bln	CLOUD - THICK AT TIMES	
				CASS CCD	1800 G=6050	250 μ	λ_c=6610				
85K		V 1.36	B7 V						Bln (Telluric)	AIRMASS = 1.18	
										HUMIDITY OUTSIDE ≈ 85% TEMP: -11.9°C	
35K		V 5.32	B8 III						Bln	AIRMASS = 1.025	
										All to Pomeroy, W.O.R.M.	

225

Sunman

Date 1993 Feb 14/15 Observers H.W. / T.M.

Slit Rotatn Tests & adjustment

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11952	Comp Before adjustment					0 0	+	FeNe CLEAR	20s
11953	Comp after adjustment to Rotation ≈ 30° CCW					"	"	"	20s
11954 55	Focus Test	Comp / Stellar Hartmann	2222			"	"	"	20/20
	1993 Feb 15/16	Slit Rotatn Tests TM							
11956	Comp Before adjustment							FeNe CLEAR	20
957	Comp After Large ≈ 180° CCW adjustment							"	20

Spectr. Temp. ..... Dome Temp./Hum. -2.7°C 66.2% Transparency Conditions Cloudy 224.

Focus 6.97

Spectr. Temp. ..... Dome Temp./Hum. .....

CCD FMIT for Rotator Tests

CLAMBDA 90 CGAin 520 0 130 1024 1 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=4990	310u 3 windows	5140Å	5ci	Rotatn	Lower slit ≈ .5 pixel Red of upper window.	
								6ci	Tests	Upper & Lower slit pos Line up. Right on	
-2.7°C 6.97	set	Red end		Blue end Right on stellar .3 pixel Red		310u	5140Å	1ci 2ci	Focus	510 0 30 1024 5 1 CCD FMIT	
										[(Lower ≤ 1.0 pixel Red of upper) 510 0 160 1024 1 1 CCD FMIT]	
Dome T = -00.7°C	Set	6.97		CASS CCD	1800/4990 Length	300u Full	5140Å	3ci 9ci			

225
Pg #1 Wed-Thurs

Date 1993 Feb 17/18 Observers Hdg - Tn

Emulsion Batches:

SET CS386 Time Ahead 2 min to MATCH MKID WWV Time.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC1 9958 11959	Focus Comp Hart + mon / stellar Hart			2330 47		0 0	+12°	Fe Ar clear	20/20
960	BIAS(4)								
961	Comp							Fe Ar clear	60s
962	HD 87901	10 03 07	+12 27	20 50 00					103s
963	HD 87901	"		20 53 20					101s
964	Comp				TIME IN HEADER IS 2 MINUTES SLOW			Fe Ar Clear	60s
965 967	FLATS x 3							TUNG Ap=1/2	7s
968	Comp							Fe Ar clear	60s
969	BD+18 2307	09 56 12	+17 53 27	21 10					15?
970	Comp							Fe Ar Clear	60s
971	FLAT							TUNG A=1/2	7s
972	BIAS(4)								
973	BIAS(4)	Reopened Dome		Topup Complete by 00 40 EST					
974	FLAT							TUNG A=1/2	7s
975	Comp			00 53 42				Fe Ar clear	60s

Spectr. Temp. ..... Dome Temp./Hum. -6.5°C 65% H Transparency Conditions . PART. CLEAR ..... 226.

Focus ~~7.07~~ 6.93 new set

Spectr. Temp. ..... Dome Temp./Hum. ..... 90CGAIN CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
T= -7.0°				CASS CCD	1800 l/mm G=6020	300u FULL	6563Å	1c; 2c;	Focus test	420 010 1024 30 1	Stellar .3 Red
					NOT PERFECTLY CENTERED			1c;		CCD FLAT 480 0 50 1024 4 1	
								3c;			
30K		1:35	B7I$_n$					9c;	Telluric Std	MAX 6000ADU	
30K								4c;	"	MAX 5000ADU	
								5c;			
								6c;			
								7c;			
99	poor							8c;	Hdy pgm	CLOUDED IN	
								7c;			
								9c;		MAX = 12.1K ADU	
								1c;		T = -8.5°C To Perseus	
								1c;		Pmo T = -9°	
								9c;		MAX = 13,650 ADU	
								10c;			

227
pg#2 Wed - Thurs

Date 1993 Feb 17/18 .... Observers Hdg. / T.n .....

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Eye Mir
cc11976	BD+18 2307	09 5612	+17 5327	00 57 42		00 38W			40s	209
77	"			01 04 53					40s	225
78	"			01 12 08					40	225
79	"			01 19 28					40	220
80	"			01 26 33					40	215
81	"			01 34 01					40	220
82	"			01 41 14					40	217
83	BIIS(4)									
84	Comp							Fea Clear	60s	
85	FLAT							TUNG A=1/7	6 Sec	
86	BD+18 2307	09 5612	+17 5327	01 53 19					40s	230
87	"			02 00 25					"	210
88	"			02 07 34					"	220
89	"			02 14 43					"	210
90	"			02 22 07					"	202
91	"			02 29 18					"	203
92	"			02 36 25					"	217

Spectr. Ten
Focus ....
Spectr. Ten

Spectr. Temp. ..... Dome Temp./Hum. −9.0°C ... 70.7% Transparency Conditions ... Clearing again ... 228

Temp Dropping Fast −10.5° By 01:30 HIGH CIRRUS

Focus ... 6-93 ...

Spectr. Temp. ..... Dome Temp./Hum. ..... CCDT = −100.5°C

Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
209	5"	10		CASS CCD	1800 l/m G=6020	300μ Full	6563Å	11c:	Hdy pgm	1128 HIA MASS	
225								12c:		over 7 cols 1K photons above bkgnd	
225								13c:			
220	5-8"							14c:			
215								15c:			
220								16c:			
210								17c:			
								1c:		Dome T = −11.2°C	
								18c:			
								19c:		MAX = 11.9 KADOC/pixel	
220								20c:		USE STHR4405.BAT ×4	
210											
220											
210								20c:			
202								21c:			
203								"			
217										SLOWED OUT AFTER 2:10	

229
pg #3

Date 1993 Feb 17/18 Observers Hdy / Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc11993	BIAS(4)								
94	FLAT							Tung A=1/2 FeAr Clear	7sec
95	COMP								

Spectr. Ter
Focus....
Spectr. Ter
Exp. Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Cloudy..... 230

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -11.5°C 74%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										11894 ADU MAX	

231
pg #1 Thurs - Fri

Emulsion Batches:

Date 1993 Feb 18/19 Observers Hdy. I.T.n

CS386 Time exactly same as MMT ... w.w.v time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC11996 97	Focus Comp/Stellar		MOVED GRATING TO 6050						
11998	BIAS(4)			18 29 48					
FM00478 A B C D	HD 29587	04 41 09	+42 06 25	18 44		00 18E	2×67ms 2×133ms	'N' mode	
11999	Comp			18 46 27					
12000	HD29587	04 41 09	+42 06 25	18 49 17					274s
1	COMP							FeAr Clear	60s
2	FLAT							Tung A=1/3	7s
12003	BIAS(4)								
4	COMP							FeAr Clear	60s
5	HD 87901	10 03 03	+12 27	19 09 24					151s
6	HD 87901	"	"	19 12 26			"		146s
7	COMP							FeAr Clear	60s
8 9 10	FLATS×3							Tung A=1/2	
11	BIAS(4)								
12	Shen grabbing frames	Comp?						FeAr Clear	60s
13	FLAT							Tung Ap=1/2	7s

Spectr. Temp. ..... Dome Temp./Hum. *-8.3°C 56.7% Transparency Conditions ... FINE ... 232

Focus .... 6.93 ..... Topup done by 18:15 Dome open & FANS on BY 17 50

Spectr. Temp. ..... Dome Temp./Hum. ..... 90CCGAIN CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
* T=-10.6	Now	(Fast drop)		CASS CCD	1800 G=6020	300u FULL	~6533Å		[Stellae .2 pixel Red]	420 0 10 1024 301 CCDFMT OBSERVING format	OK
					1800 G=6050		6563Å			480 0 50 1024 4 1 CCDFMT	
55x55 pixels		7.29	dG2		(Dome SW Light+wastwind)				Seeing test	To/also normalized on	
					(Radio SAY 20 kms/hr from West)			3c;			
1030	4"	7.09	dG2					4c.	Std Vel		
					G=6050		6563Å	5c; 6c;			
					1800in/mm G=6035		"	1c;		Slight λ change.	
13963								7c;			
36660								8c;		5688 ADU	
38400								9c;		χ^2 = 3.65	
13914								10c;			
								11 12c; 18		10949	
								1c;		Dome T = -12.5°C	
								14			
								15		11.3K ADU MAX	

233
pg#2

Date 1993 Feb 18/19 Observers Hdy/Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
tc12014	BD+18°2307	09 56 12	+17 53 27	19 34 17					410s
15	"			19 41 32					412s
16	"			19 49 12					410s
17	"			19 56 21					410s
18	"			20 03 48					410s
19	"			20 10 57					"
20	"			20 18 05					"
21	~~BIAS(4)~~ FLAT							Tung A=1/2	7s
22	Comp							FeAr Char	60s
23	BIAS(4)			20 29					
24	BD+18 2307			20 30 17					410s
25	"			20 37 26					"
26	"			20 44 34					"
27	"			20 52 01					"
28	"			20 59 09		03 16E			"
29	"			21 06 14					"
30				21 13 30					ERR!

Spectr. Temp. ..... Dome Temp./Hum. 7.9°C 61.3%H Transparency Conditions . PART Cloudy 204

Focus . 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
440		9.7-9.9	~~G-late~~	CASS CCD	1800l/mm G=6035	300μ FULL	exactly 6563A	16c; 17c;	Hg+Ne		
240	3"		KO III					18c;		Repeat ×2	
225								18c;			
≈250								19c;	×~~clr~~	Repeat ×3	
230									×~~clr~~		
								19c;			
								20c;		1043 Dome T = −13.2°C	
								21c;			
230											
230								22c;			
240											
233											
240											
240 230								23c;		IGNORED TIME	

PgA3

Date 1993 Feb 18/19 Observers Hdy / T.m. / Shen

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 1203 31 32	BIAS(4) COMP								
33	FLAT								
34	BD+18 2307	09 56 12	+17 53 27	21 28 02					
35				21 39 10					
36				21 42 19					
37				21 49 58					
38				21 57 05					
39				22 04 13					
40				22 11 22					
41	BIAS(4)			22 19					
42	FLAT							TUNG A=1/2 FeAr Cl	65 60
43	Comp								
44	BD+18 2307			22 26 24					
45	"			22 33 37		01 43 E			
46	"			22 40 41					

Spectr. Te
Focus ..6
Spectr. Te

Exp. Mtr
258
Sm 82
540
250
350
450
470
970
980
990

Spectr. Temp. ..... Dome Temp./Hum. -13.5C .65% Transparency Conditions . PART. cloudy ..... 23.

Focus . . 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

C LAMBERT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CHSS CCD	1800 G=6035	300u FULL	6563A	24ci	Hdg pgm		
								25		13067	
258								26ci		R x 3	
Sum 82	2"-4"										
540								26ci			
250								27ci		Repeat x 4	
250											
260	3"-5"										
240								27ci			
								1ci			
								28ci		MAX = 11.8K ADU/pixel	
								29ci			
270	3"	V 9.4 -9.9	KOIII					30ci		Clear again	
280											
280								30ci			

pg237

Hdy on 19/24 photometry of same OBJ

Emulsion Batches: .....

Date 1993 Feb 18/19 Observers Hdy. J.T.n

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC12047	BD+18 2307	09 5612	+175327	22 48 24					40s
48				5531					
49				23 02 40					
50				23 09 49					
51	BIAS(4)								
52	Comp							FeAr CLEAR	60s
53	FLAT							TUNG A=1/2	6s
54	BD+18 2307			23 33 48					40s
55	"			3057					"
56	"			3806					"
57	"			4514		00 30E			"
58				5323					"
59				00 00 29					"
60				0738					"
61	BIAS(4)							~~FeAr CLEAR~~ Tung	
62	FLAT							HP=1/2	6s

Spectr. Temp. ..... Dome Temp./Hum. −14.0°C 67.0% Transparency Conditions Mod. Hy. Clear ..... 238...
But Inc haze

Focus ... G-9.3 .....

Spectr. Temp. ..... Dome Temp./Hum. −13.9°C 66.8%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
290		9.4 −9.9	KO III	CASS CCD	1800 l/mm G=6035	300μ Full	G563A	30c	Hdy pgm	Repeat x4	
280	3"									H2 Em ≃ 8% above continuum	
290											
245	3"-4"							30c;			
										Dome T = −13.8°C	
								31c;			
								32c;			
230								33c;	Hdy pgm		
255										Repeat x4	
sum of 2	4"										
475								33c;		(CCDT = −102.0°C Unusually cool?)	
215											
230											
233								33c;			
									Nice Dists	(Real Clean, No noise As are all the others Tonight)	
								2c;	12K max		

pg 236 5

Date .1993..Feb.18/19.... Observers ..Hdy/.J.H.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
EC12063	Comp							FeNe Clear	60s
64	BD+18 2307	09 56 12	+17 53 27	00 20 53		00 06 W			40s
65				2802					
66				3511					
67				4220					
68				4978					
69				5637					
70				01 0348					
71	BIAS(4)								
72	Comp							FeNe Clear	60s
73	FLAT							Tung Ap=1/2	6s
74	BD+18 2307			01 16 42					40s
75	"			2351					
76	"			3100					
77	"			3809					

Spectr. Ter
Focus ... 6
Spectr. Ter
Exp Mtr
140
370
Sun 2
75
Sun. 2
530
300
550
385
400
320

Spectr. Temp. ..... Dome Temp./Hum. -14.0°C 66-8% Transparency Conditions ... 5/ hazy 240

Focus ... 6:9.3 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G-6035	300μ FULL	6563Å	3ci			
240	3-5"	9.4 -9.9	KC III					4ci	Hdy pgm	Repeat x 7	
270											
Sum 2											
525											
Sum 2											
530											
300								4ci			
								1ci		Dome T = -14.5°C	
								5ci			
								6ci		10.7 K ADU max	
280								16ci		CCD T = -101.0 NORMAL I guess	
285										pronounced absorption now Blue of Emission	
300											
300											

241
pg#6

Date 1993. Feb 18/19..... Observers . Hdy. / T.n.....

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC12078	BD+18 2307	09 56 02	+17 53 27	01 45 45		01 31W			40s
79				5252					
80				02 0001					
81	BIAS(4)								
82	FLAT							TUNG Ap=1/2 FeAr Clear	6s
Write 87	Comp WRITTEN Later								60s
83	BD+18 2307			02 12 46					40s
84				1953					
85				2702					
86				3411					
88				41 55					
89				4904					
90				5613					
91				03 0321		2 52W			
92	BIAS(4)								
93	Comp							FeAr Clear	60s

Spectr. Ten
Focus. 60
Spectr. Ten

Exp Mtr.

280
680
490
435
380
375
375
500
350

Spectr. Temp. ..... Dome Temp./Hum. −14.6°C ... 68.5% Transparency Conditions ... some cloud ... 242

Focus .6.9.3.....

Spectr. Temp. ..... Dome Temp./Hum. −15.2°C < 64.8%

Exp. Mtr.	Seeing	Mg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
280		9.4 −9.9	KOIII				6563Å	9ci	Hdg pgm	R x 3 1.177 Airmass	
280											
	3-5"							9ci		CCDT = −102.0° again	
								1ci		Dome T = −14.6°C	
								11ci		10.8K HOU max	
								12ci			
290	3"							13ci	Hdg pgm	R x 1	
285											
280											
275								13ci			
275								18ci		R x 4 Hd emiss now gone	
Sum of 2										~ En gone or Fan Blue?	
500											
250								18ci		CCDT Still −102.0 exactly	
								1ci			
								21ci			

243 pg #7

59 Date 1993 Feb 18/19 Observers Hdg / Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
cc12094	FLAT							TUNG H=1/2	7s	
95	BD+18 2307			031720					41G	230
96	"			2429					"	230
97	"			3137					"	232
98	"			3846					"	230
99	"			4608						250
12100	"			5317						255
01	"			4 0026						250
02	"			0734		0353W				250
03	BIHS(4)									
04	FLAT							TUNG H=1/2	8s	
cc12113 ~~09~~	Comp	written Later	@	0517				Fe Ar Close	60s	
05	BD+18 2307			4 1908					41G	240
06	"			2615					"	230
07	"			3324					"	235
08	"			4033					"	250

Spectr. Temp. ..... Dome Temp./Hum. -15.2°C 69.7% Transparency Conditions ...Cl. hazy..... 244

Focus . 6.93.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
							6563Å	20c;		MAX 12.9 K ADU/pixel	
230	4"							22c;	Hdy pgm	R×4	
230											
232										Hd Em returning (Abs in Red)	
230											
250								26c;			
255											
250											
250								26c;			
								1c;		Real Clear also Domet = -15.4°C	
								28		11.9 K ADU MAX	
								29			
240								30c;	Hdy pgm		
230	5"										
255											
250								30c;			

245
Pg #8

71 Date 1993 Feb 18/19 Observers Hdy/JTn

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
09 CC12 10	BD+18 2307	09 56 12	+17 53 27	04 48 11					40s
10				04 55 20					"
11				05 02 29					"
12				05 09 38		Limit 04 52W			"
14	BIAS(4)								
15	Comp							FCAr Clear	60s
16	FLAT							Tung A=1/2	8s
17	Comp Topug done by	05 35		05 44 40				FCAr Clear	60s
18	BIAS(4)								
19	HD177724	19 00 49	+13 46 24	05 48 04					243
20	"			05 53 33		3 27E			255
21	Comp							FCAr Clear	60s
02 — 24	FLATS x3							Tung A=1/2	
25	BIAS(4)								
26	Comp of Nova Cyg posn							FCAr	60s
27	NOVA Cyg 92	20 27 43	+52 17 39	06 13 34					
28	Comp //	CC12129 FLAT + Nova Posn. 7sec				Ap=1/2		FCAr	60s

Spectr. Ten
Focus.....
Spectr. Ten

Exp Mtr
225
230
220
137
43K
43K
137

Spectr. Temp. ..... Dome Temp./Hum. -15.8°C 70.0% Transparency Conditions ..sl. hazy..... 246..

Focus .....6.93.....

Spectr. Temp. ..... Dome Temp./Hum. -16.2°C 71%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
225							6563Å	30i	Hdy pgm	CCDT @ -101.9°C	
230											
220										CCDT = -101.8°C	
137								30i		Actually 300 secs Star Reached Limit @ 45W	
								1i			
								31i		DRIVE OFF	
								32i		11.7K ADU MAX	
								34i		CCDT - 98.9° Warming?	
								1i		: Topyndone	
40K		2.99	A0 ▽n					35i	Telluric Std	4100 ADU MAX	
46K								3i	"	5630 MAX	
								5i			
								6i		MAX = 62K ADU	
273	3"	Point		MAX = 600 ADU				6i	YES it is Nova Attempt, but equipment problems for many stars here.		
								7i			

247

Tues - Wed

Date 1993 Feb 23/24 Observers Hdy - Tn

Emulsion Batches: .....

.....

CSS386 9 sec ahead of WWV mk III time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC12130	BIAS(4)			2310					
31	Comp							Fe Ar Clear	60s
32	HD87901	10 03 03	+12 27	231557					90s
33	"	"	"	231804					109s
34	Comp	"	"					Fe Ar Clear	60s
35 37	FLATS x 3	"	"					TUNG Ap = 1/2	8sec
38	BIAS(4)			232626					
39	Comp						* A = 1/2	Fe Ar ~~Clear~~	60sec
cc12140	BD+18 2307	09 56 12	+17 53 27	233410		00 22E			444
41	FLAT							TUNG A = 1/2	8sec
42	Comp							~~Fe~~ Ar Clear	60sec
43 44	Focus Comp Hartman/stellar Hart			23 ~~20~~ 54		0007E	+17 27	Fe Ar Clear	20/20
45	BD+18 2307			001736					410s

Spectr. Temp. ..... Dome Temp./Hum. −9.1°C 64%H Transparency Conditions .. PARTIAL clearing .... 248..

Focus ... 7.00 set too from 6.93

Spectr. Temp. ..... Dome Temp./Hum. −13.0°C 65%H

CCDT → −100°C 90 GAIN

Exp. Mtr.	Seeing	V Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5530	300μ Full	5888Å	1c:	480 0	50 1024 4 1 CCDFMT	
4								3c:			
45K		1.35	B7 V					4c:	Telluric Std	7.3K ADU MAX	
60K								4c:		9.9K ADU max	
								5c:			
								6 ci 7c: Set		MAX = 11.8K ADU/pixel	
								1c:		Dome T = −13°C	
								8c:		Accident Aperture wrong	
187	6"	9.4 9.9	K0 III					9c:	Hdy pgm	part cloudy 1.121 AIR MASS	5 cals 800, factors ΣAUG obs Bkgnd
								10c:		MAX = 12K ADU/pixel	
								11c:		Too Cloudy	
T = −135°C Set 7.00				425-434 x Plot				12c/14c:	Focus Test	FOR Focus only 420 0 10 1024 30 1 CCDFMT	.3 Red
198								15c:	Hdy pgm		
										1.1 to Perseus & Worm	

249
Pg #1 Wed - Thurs

Date 1993 Feb 24/25 Observers Hdy - Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 12146 147	Focus					0 0	≈35°	FeAr clear	20/20
148	BIAS(4)								
FM00479 HBC	HD29587	04 34.5	+41 57		18 43	≈0 0		"N" mode	
cc 12149	Comp							FeAr clear	60
50	HD87901	10 03 03	+12 27	18 55 08					203
51	"	"	"	18 59 06					
52	BIAS(4)								
53	Comp							FeAr clear	60s
54 56	FLATS x3						+12m	TUNG A=1/2	9s
57	~~Comp~~ FLAT	at BD+18 2307 posn					+17 27	"	9s
cc12159	Comp		**	BIAS(4) cc 12158 Added Here.				FeAr clear	60s
cc12160	BD+18 2307	09 56 12	+17 53 27	19 16 42		4 37E			40
61	"			19 24 11	edit time				"
62	"			19 31 20					"
63	"			19 39 20					"
64	"			19 46 26					"

Spectr. Temp. ..... Dome Temp./Hum. -10.0°C 57.5% Transparency Conditions .. FINE ..... Cloudy from 20 & Venus close together

Focus .. 700 .....

Spectr. Temp. ..... Dome Temp./Hum. -12.7 ..... 54.9% Top up complete by 18:15

90 CCD 4 in CCDT → -100°C

Exp. Mtr.	Seeing	~~Dig~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
420 010 1024 30 1 CCD Focus Fint				CASS CCD	1800 l/mm G=5530	300u Full	* 5893Å	13 ci 14 ci	stellar Rad .4 pixels	* exact d, same setes last night	
	Light N wind-			4Kms/hr [Radio Report]		FANS on By 18 EST (even/odd criteria) 300u, Full (above Slit)				(HD 29587 also encoder normaliser)	
55×55 pixels	OK	7.29	dG2	2×67 msec + 2×133 msec					Also a std	Dome West.	
								3c:	not done however		
60K	poor	1.35	B7V					4c:	Telluric Std	MAX 10K ADU/pixel	
60K								5c:	"		
								1c.		Dome T = -120°C	
								6			
								7		MAX 10K ADU/pixel	
								8c:			
								9c: CSS 386	Time	normalized to www V Time	
230	4"	9.4 9.9	KO III					10c:	Hdy-pgm	≈ 900 photons 5 cols. Σ Avg above bkgnd.	30/1?
210								~~11c~~	"	2.16 AIR MASS	
210								12c:		Buzzy down low freq.	
210								13c:		Repeat x5	
215											

251
pg#2 wed-Thurs Hdy 24"/19" for Photometry of SAME

Emulsion Batches: .....

Date 1993. Feb. 24/25. Observers . Hdy - T.H. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc12165	BD+18 2307	09 56 12	+17 53 27	19 53 35		3 59 E			40s
66				20 00 44					"
67				20 07 53					"
68	BIAS(4)								
69	Comp							FeAr Clear	60s
70	FLAT							TUNG A=1/2	9sec
cc12171	BD+18 2307	09 56 12	+17 53 27	20 20 34					40s
72				27 43					"
73				34 51					"
74				42 00		3 10 E			"
75				49 26					40s
76				56 36					"
77				21 03 44					"
78				21 10 53					"
79	BIAS(4)								
80	Comp / FLAT	FLAT	cc12180				FeAr Clear	TUNG A=1/2	
81		Comp	cc12181						

Spectr. Te
Focus....
Spectr. Te

Exp Mtr.	
220	
215	
230	
230	
220	
230	
220	
230	
229	
231	
231	
1/9 sec	

Spectr. Temp. ..... Dome Temp./Hum. -12.8°C : 59.0% Transparency Conditions ..Slhazy..OK.....252

Focus ....7.00.....

Spectr. Temp. ..... Dome Temp./Hum. ..... CLAMBDA

Exp. Mtr.	Seeing	~~Mag.~~ ✓	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
220	3-4"	9.4 -9.9	KOIII	CHSS CCD	1800 l/mm G=5530	300u Full L	5893Å		Hdg pgm		
215											
230								12ci			
										-13.2°C Dome T	
								13ci			
								14ci		11K ADUmax	
230								15ci	Hdg pgm	R×4	
220											
230	3-4"										
220								15ci			
220	3-5"							16ci.		R×4	
229											
231											
231											
								1ci			
60/9 secs								17/18ci			

253 Pg #3

Date 1993. Feb. 24/25.. Observers ..Hdg.-T.n.....

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC12182	BD+18 2307	09 56 12	+17 53 27	21 22 35					40s	237
83				21 29 44					"	240
84				21 36 53					"	239
85				21 44 01					"	230
86				21 52 03					40s	220
87				21 59 09					"	220
88				22 06 18					"	207
89				22 13 27		01 38E			"	210
90	Bills(4)									
91	Comp			22 21 47				FeAr Clear	60s	
92	FLAT							Tung Ap=1/2	9s	
93	BD+18 2307			22 27 39					40s	236
94				3446					"	230
95				4155					"	165
96				4903					"	190
97				5612					"	145

Spectr. Temp. ..... Dome Temp./Hum. -13.6°C 62.1% Transparency Conditions .. Fine 254

Focus ... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CLAMBDA

FANS TURNED off after hearing that Baton Rouge, here was at -20°C no sense increasing cooling efficiency of Dome.

Exp. Mtr.	Seeing	~~Pkg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
237		9.4 →9.9	KO III	C4SS CCD	1800 ln/mm G=5530	300µ Full h	5893Å	19ci	Hdy pgm		
240	4"-5"										
239											
230								19ci			
220										R x 4	
220										CCDT = -102.0°C	
207											
210								20ci			
								1ci		-135°C DomeT	
								21ci			
								22ci		~~3~~ 4K 1x4X	
206								23ci		Repeat x5	
200	4"								Fans unplugged	at 22 41 Dome T=-135°C	
165										some cloud in area	
190	3"									Note prog Em a bit Hom of NaD? prob not	
195								23ci		Emission obvious near 5393Å	

255
pg#4

Date 1993 Feb 24/25 ... Observers Hdg / Tu / Iwaki ...

Emulsion Batches:

31

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC12198	BD+18 2307	09 56 12	+17 53 27	23 03 38		00 48 E			40s
99				1047					
CC12200				1755					
01	BIAS(4)								
02	FLAT							Tung Ap=½	8s
03	Comp			2706				Fe Ar clear	60s
04	BD+18 2307			23 3034					
5				23:37:41					
6				23:44:44					
7				23:51:58					
8				23:54:51					
9				00:06:58					
10				14:07					
11				21:16					
12	BIAS							Fe Ar clear	60s
13	Comp								
14	FLAT							Tung Ap=½	8s

Spectr. Temp. ..... Dome Temp./Hum. -13.9°C 64%H Transparency Conditions . Sl. hazy ..... 256.

Focus ... 7.00 ..... some cloud coming

Spectr. Temp. ..... Dome Temp./Hum. -13.9°C 64.7%

Exp. Mtr.	Seeing	~~Pkg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
185	<3"	9.4 -9.9		Nothing changed here.					Hg pgm	R x 3	
195	3"									(now stronger NaD stellar emission	
200								24c;		weaker em now well, maybe not em	
								1c;		Dome T = -14.1°C	
								25c;			
								26c;			
195								27c;		Repeat STHR4105.BAT 4 sp	
210											
215											
208											
227										repeat star4105.bat 4	
235											
255											
260								27c;			
								1c;			
								~~25c;~~			
								27c;			

257 pyHs

Date 1993 Feb 24/25 Observers Hdy. f. T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Ter Exp. Mtr.
cc12215	BD+18 2307	09 56 12	+17 53 27	00 36 25		00 45W			410s	290
16				00 43 32					4	
17				00 50 41					4	570
18				00 57 50					4	595
19				01 05 19					4	290
20				1227					4	300
21				1936					4	280
22				2645					4	270
23	BIAS(4)									
24	FLAT							TUNG Ap=1/2	8s	
30	* Comp written later ~~by accident~~							FEAT CLEAR	60s	
25	BD+18 2307			01 40 12					410s	320
26				47 19					4	290
27				54 28					4	295
28				02 01 36					4	1 b+4
29 ~~30~~				02 11 26					4	250

Spectr. Temp. ..... Dome Temp./Hum. -14.2°C 65.3% Transparency Conditions Thin cloud 258

Focus 7.00

Spectr. Temp. ..... Dome Temp./Hum. -14.5°C 69.5%H

Exp. Mtr.	Seeing	~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
290		9.4 ~9.9	K0 III				5893Å		Hdg pgm	R+4	
sum 0											
570											
295								30c;			
290											
300	2-3"									cloud by end-	
280										then clear again	
290								30c;			
								1c;		Dome -14.3°C	
								2c;			
								3 1c;			
320	2-3"							32c;	Hdg pgm		
290											
285										Some cloud here now	
? bad ex.											
750										≈ 3 min gap between end and start of cc1229	
								32c			

259 pg#6 Wed - Thurs Hdg on 24"/19"

Date 1993 Feb 24/25 Observers Hdg/Tn

Emulsion Batches: .....

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55

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
cc12231	BD+18 2307	09 56 12	+17 53 27	02 19 00	edit time	02 29W			~~180s~~	320
32				02 27 14				412s	~~410~~	270
33				02 34 26		02 43W			410	290
34	BIAS(4)									
35	Comp			43 13				FeAr clear	60s	
36	Flat							TUNG Ap-1/2	9s	
37	BD+18 2307			02 47 57		02 57W			410s	340
38				55 04					"	310
39				03 02 13					"	325
40				09 22					"	310
41				16 41					"	355
42				23 50					"	
43				30 59					"	700
44				03 38 13				Expose	411	315
~~45~~ 46	BIAS(4) FLAT							TUNG N=1/2	~~60s~~ 9s	
47	Comp							FeAr clear	60s	

Spectr. Temp. ..... Dome Temp./Hum. -14.5°C 73% Transparency Conditions PART cloudy 260

Focus 7.00

Spectr. Temp. ..... Dome Temp./Hum. -14.5°C 73%

→ completely cloudy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
320	2"-3"	9.4 -99	KO III	IN	same	parameters		33ci	Hdy pyr	hazy now	
270											
290								33ci			
								1ci		Dome T = -14.2°C	
								34ci		CCD T = -102.2°C	
								2ci		MAX = 11 K ADU/pixel	
290								35ci		Rx4	
310											
325											
310								35ci			
355											
sum of 2											
700	2"-3"							35ci			
325								~~35ci~~ 35ci		1.67 AIR MASS, clouds too at end	
								1ci			
								2ci		CCD T = -102.0 s#11	
								3ci	Then Topup commenced		

261 pg # 7

Date 1993 Feb 24/25 Observers Hdy - T.G

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc12248 49	Focus Test	Comp				02 29W	+17 26		
50	BIAS(4)								
51	Comp							Fe Ar clear	60s
52	HD177724	19 0049	+134253	04 3726					699
53	"			4 4926					
54	BIAS(4)								
55	Comp							Fe Ar clear	60s
56 58	FLATS x 3							Tung Ap = 1/2	9s

Spectr. Temp. ..... Dome Temp./Hum. -14.1°C 73% Transparency Conditions ... Cloudy ... 262

Focus ... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Then sl clearing after Tup4

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	· Encoder Temps logged too				1800 6=5330	300u Full	5893Å	36c: 37c:	Focus	Stellar Hartmann still sl of Comp posn. by eclipse	Red @435
										~~R~~ Stellar R.ight on @686 pixel	Bl
						All	to Perseus	3ci	& WORM		
50K		2.99	AOV					4c:	Telluric Std	Cloudy a bit Bmax	
		"	"					5c:	"	AIR MASS=2.108	
								1c:			
								6c:			
								7c:		10.8 max	

263 pg #1 Thurs Fri

Date ..1993..FEB.25/26.. Observers ..Hdy/Tn/Fbr.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC12259 260	Focus Test			~1824		0 0	+42°	FeAr Clear	40/40
261	BIAS(4)								
262	Comp							FeAr Clear	60s
263	HD39801	05 49 45	+07 23	18 49 32	23 ~~49 52~~ 50 00				35s
264	Comp								
265	HD ~~39 32~~ 39801	05 49 45	+07 23	18 56 23					57
266	Comp								
271	BIAS(4)			19 08 30					
267 – 270	FLATS x4	at HD39801 posn.					TUNG A=1/2	7, 7, 6, 6	6s/
271	BIAS(4)			21 51 21					
~~272~~ 273	BIAS(4) Comp							FeAr Clear	60s
274	HD62509	07 39 12	+28 16	21 59 32					42s
275	Comp							FeAr Clear	60s
276	Comp							"	"
277	HD87901	10 03 03	+12 27	~~22~~ 1029					60s

Spectr. Temp. ..... Dome Temp./Hum. -7.6°C/65.2% (1815) Transparency Conditions ... PARTLY CLOUDY ... 264.

Focus .. 6.8.8 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90C GAIN CCD → -100°C

Exp. Mtr.	Seeing	~~Dsg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm i=6035	300μ FULL	6563Å			Stellar Rightson	
							Tel	Normalizata	(Encoders) STHR HR1454		
								3			
≈10K		0.80	M2Iab					4	i-G Pgm		
								5			
20K								6	rG Pgm	FULL SLIT Guided 200cts MAX 3500 ADU	
								7c.			
								8c.		Dome T = -7.8°C	
								&c.		13-7 MAX ADU/pixel	
								10c.		≈ 7.7 Amb T	
								9c.			
	1-2"	1.14						10c.	Stdvel	FULL SLIT Length guided well ≈ 20 columns.	
20K			K0III								
								11c.			
								12c.			
50K		1.35	B7V					13c.	Telluric Std	Almost Full slit Length guided ≈ 20 columns	

265 pg #2

Date 1993 Feb 25/26 Observers Hdy / Fbr / Tm

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC12278	HD87401	10 03 03	+12 27	22 12 42					8m
79	BIAS(4)								
80	Comp							FeAr Clear	60s
81 → 83	FLATS x3	Backed to here on Perseus						THAR Ap=1/2	6s
CC12284	Comp BIAS(4)							FeAr Clear	60s
85	~~BD+17 2307~~	~~09~~	~~+17~~						
86	FLAT							THAR Ap=1/2	6s
87	BD+18 2307	09 56 12	+17 53 27	22 52 09					4m
88	"								"
89	"			23 07 20					"
90	"			23 14 28					"
91	"			23 21 37					"
92	"			23 29 03					"
93	"			23 36 11					"
94	"			23 43 20					"
95	"			23 50 29					"

Spectr. Temp. ..... Dome Temp./Hum. -8.5° 66-85% Transparency Conditions MAINLY cloudy 2Cs

Focus 6.88

Spectr. Temp. ..... Dome Temp./Hum. ..... CLAMBOA

Exp. Mtr.	Seeing	Pic. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
66K	1-2"	1.35	B7V	CASS CCD	1200 G=6035	300μ FULL	6563Å	14c;	Telluric Std.		
								1c;			
								15c;			
								~~16c~~		MAX 11.3K ADU	
								16c;			
								16c;		11.8K ADU max	
270	1-2"	9.4 -9.9	K0III					17c;	Hdy Pgm	thin cloud	
328								18c;		Rx4	
314											
311											
312								18c;			
309											
313	2-3"										
286											
280											

267
pg #3

Date 1993 Feb 25/26 Observers Hdy / Ty

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
6	BIAS(4)								
7	FLAT								6sec
12298	COMP								60sec
12299	BD+18°2307	09 56 12	+17 53 27	00 02 13					410s
12300	"			00 09 22					"
01	"			00 16 31					"
02	"			00 23 39					"
03	"			31 40		00 44W			"
04	"			38 47					"
05	"			45 56					"
06	"			53 04					"
07	BIAS(4)								
08	Comp							Fe Ar Clear	60s
09	FLAT							TUNG Ap: Y2	6s
10	BD+18 2307			01 05 12					410s
11	"			12 21					410

Spectr. Temp. ..... Dome Temp./Hum. -9.7°C 69.1% Transparency Conditions Some cirrus ..... X8 .

Focus ... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	~~Pfg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	1800 l/mm G=6035	300μ FULL	6563Å	1c;			
65sec								19c;		12.8 M	
65sec	r4175	9.4 -9.9	K0III					20c;			
415	302							21c;	Hdgpgm		
"	303										
"	335	2'-3"									
"	370										
"	380	2"						22c;		R+1 thin cloud	
"	sum×2										
"	760									moderate cloud at end	
"	317							22c;		CCDT = -102.0°	
								1c;			
65								23c;			
65								24c;		13AX 10GX AO4	
415	340	< 2"						25c;	Hdgpgm		
415	360										

264
Pg 04

Hdy → 24/19° for photometry of SAME

Date 1993 Feb 25/26 Observers Hdy - Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Mtr.
CC12312	BD+18° 2307	09 56 12	+17 53 27	01 19 30					40s	270
13				2638					"	240
14				3403					"	265
15				4112					"	260
16				4820					"	240
17				5529					"	280
18	BIAS									
19	FLAT							TUNG Ap=1/2	6s	
20	Comp							Fear clear	60s	
12321	BD+18° 2307			02 09 54				(40005)	40s	203
2	"			02 17 03				use	"	191
3	"			02 26 58					40s	180
4	"			02 41 09					"	227
5	"			02 48 18					"	230
6	"			02 55 39					"	250
7	"			030254					"	235

Spectr. Temp. ..... Dome Temp./Hum. -10.1°C ... 64.2% Transparency Conditions . PART. cloudy 270

Focus ... 6.86 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CLAIMBDA

Exp. Mtr.	Seeing	~~Ptg~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
370	1"-2"	9.4 -9.9	KOIII	CASS CCD	CASS CCD	300u FULL	6563Å		Hdg pgm	guide clear here	
340	2-3"							25ci			
365								26c:			
360											
340											
280								26c:		Cloud at end again	
								1c:			
								27c:		10-4 KMM max	
								28c:			
203								24c:			
191										CLOUDED IN AFTER 2-3 min.	
180											
227											
230											
250	3"							29c:			
215											

271
pg #5

Date 1993 Feb 25/26 Observers .. Hdg. & T.H.

Emulsion Batches:

37

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC12328	BIAS(4)									
29	Comp							FeA+ CLEAR	60s	
30	FLAT							TUNG Ap=½	7s	
31	BD+18 2307	09 56 12	+17 53 27	03 15 37			410	OBS	410	275
32	"			2308			"		"	275
33	"			3031			"		"	280
34	"			3747					"	285
35	"			034508					"	293
36	"			5217					"	288
37	"			5925					"	263
38	"			040634					"	250
39	BIAS(4)									
40	FLAT							TUNG Ap=½	7s	
41	Comp							FeA+ CLEAR	60s	
~~42~~	~~BD+18 2307~~	~~09 56 12~~	~~+17 53 27~~	04					410s	
~~43~~	~~"~~								"	

Spectr. Temp. ..... Dome Temp./Hum. -103° 71.0%H Transparency Conditions Part. Cloudy 272

Focus ... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							6563Å	1c;			
								30c;			
								31c;		MAX 11.1 K ADU	
275	3"-4"	9.4 -9.9	KOSI III					32c;	Holy Pgm		
275								4			
280								33c;			
285								33c;			
293								34c;			
288											
263	4"										
250								34c;			
								1c;		-106° Done	
								11c;		MAX 10.8 K ADU/pixel	
								12c;			
								13x;			

273 ps #6

Date 1993. Feb 25/26.. Observers .Hdg.-T.H.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
cc12342	Comp					4 44W		Fe Ar Clear	60s	
43	HD87901	10 03 03	+12 27	04 46 55					22s	27000
44				04 51 37					234s	26000
45	BIAS(4)									
46	Comp							Fe Ar Clear	60s	
→47 49	FLATS x3							TWG Ap-1/2	8s	
12350	COMP									
51	HD148478	16 23 17	-26 13	05 13 22					43s	5000
52	HD148478	"	"	05 16 13					36s sec	16000
53	COMP									
54 55 56	FLATS x3							A=1/2	7sec	
57	BIAS(4)						-26°			

Spectr. Ten
Focus ... 6
Spectr. Ten

Spectr. Temp. ..... Dome Temp./Hum. -10.9° 73% Transparency Conditions ... Part. Cloudy ... 2.74

Focus ... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. -10.7° 73.1%

Exp. Mtr.	Seeing	Prg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						300μ FULL	6563Å	14		Tel East side of Piers	
24900		1.35	BOV					15 Ci	Telluric Std	6.5K MAX	
36000								16 Ci	"		
								1 Ci			
								17 Ci			
								18 Ci		MAX 11.7 ADU	
								19 Ci			
15000		1.08	MIB					20 Ci	rGpgm	4000 ADU	
16000								21 Ci	"	5300 ADU	
								22 Ci			
										10987 ADU	

275
pl

Date Feb 26/27 - 73 Observers Hdy (24") / Fehr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc12358	Bias (4)								
59	Comp							Fehr Clear	60s
60	HD87901	10 03 03	+12 27	190017					76s
61	— " —	— " —	— " —	190227					124s
62	Comp							Fehr Clear	60s
63 – 65	Flat x 3							Tung A = 1/2	
66	Bias (4)								
67	Comp							Fehr Clear	60s
68	Flat							Tung A = 1/2	
69	BD +18 2307	09 56 12	+17 53 27	192047					410
70	"			192755					"
71	"			193504					"
72	"			194212					"
73	"			194921					"
74	"			195630					"

Spectr. Temp. ..... Dome Temp./Hum. -5.9°C / 61.3% Transparency Conditions ..... CLEAR 276
(1840)

Focus ..... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... T_{CCD} = -100.6 NORMALIZED ON HR1454

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS - CCD	1800 G=5530	300 μ	λ_c = 5893			480 0 50 1024 4 1 ccd fmt	
60s											
76s	40K								TELLURIC		
12"3	65K								TELLURIC	AIRMASS 2.945	
60s											
										12K MAX	
60											
4.0	226		V = 9.4 - a33	KoV					Hdy		
	250										
	255										
	260										
	280										
	280										

277
p 2

Date FEB 26/27 -93 Observers Hldy. (24") Fbr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 12375	BD+18 2307			200339					410
76	"			201047					"
77	Bias (4)								
78	Comp							Fltr Lens	60s
79	Flat							Tung $\Delta = 1/2$	
80	BD+18 2307	09 56 12	12 53 27	202603					410s
81	"			203312					
82	"			204020					
83	"			204729					
84	"			205438					
85	"			210146					
86	"			210855					
87	"			211604					
88	Bias (4)								
89	Comp							Fltr Lens	60s

Spectr. Temp. ..... Dome Temp./Hum. -7.9/62.1% Transparency Conditions Clear 278
(2019)

Focus 6.88

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
300											
270											
270											
290											
300											
308											
330											
301											
330											
341											

279
P3

Emulsion Batches:
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Date ...FEB 26/27-93... Observers ....Hdy(24")/For.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc12396	FLAT							TUNG Δ=1½		
91	BD+18 2307	09 56 12	17 53 27	212737					410s	540
92	"			213446					"	520
93	"			214154					"	497
94	"			214903					"	481
95	"			215612					"	306
96	"			220320					"	290
97	"			221029					"	500
98				221738					"	300
99	BIAS (4)									
12400	COMP							Refr Clear	60s	
401	FLAT							TUNG Δ=½		
402	BD+18 2307			223431					410s	260
403				22:41:39						253
404				22:48:48						151

Spectr. Temp. ..... Dome Temp./Hum. .8.7°/.67% Transparency Conditions ....Clear.....280.
(2125)

Focus ....6.88.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 c=5530	300 μ	λ_c = 5893				
340									Hdy		
320											
299											
281											
306											
290											
300											
300											
260											
253											
251										Aircraft flew nearby	

Date . FEB. 26/27-93.. Observers ..Hdy (24")./For.....

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
405	BD+18°2307			22:55:57						480
406				23:03:06						256
407				23:10:14						144
408				23:17:23						225
409				23:24:32						256
410	BIAS(4)									
411	COMP							Fe Ar Cu	60s	
412	FLAT							TUNG A: 1/2		
413	BD+18°2307			233651					410s	360
414	"			234400					"	165
415	"			235108						490
416	"			235817					"	330
417	"			00 0526					"	169
18	"			00 1234					"	160
19	"			00,943					"	130
20	"			002652					"	210

Spectr. Temp. ..... Dome Temp./Hum. -9.5°C / 71.8% Transparency Conditions ..... CLEAR ..... 282.

Focus .... 6.82 ..... (2335)

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
260				CCSS - CCD	1800 L=5530	300 μ			Hdy		
256									↓		
244											
325											
356											
360									Hdy		
365											
390									↓		
380											
369											
360											
390										T=-9.5°C / Hum=73.1%	
390											

2nd
P5

Date ..FEB.26/27-93.. Observers ...Hdy./Fbr.....

Emulsion Batches:
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.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc12421	BIAS (4)								
22	COMP							FeAr CuSO4	60s
23	FLAT							TUNG n=1/2	8s
24	BD+182307	09562	175327	003741					410s
25	"			004450					
26	"			005916	(SYSTEM IN ANOTHER WINDOW - CHECK cc12425!)				
27	"			010625					
28	"			011334					
29	"			012042					
30	"			012751					
31	"			013500					
32	BIAS (4)								
33	COMP							FeAr CuSO4	60s
34	FLAT							TUNG n=1/2	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... CLEAR ..... 284.

Focus ..... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800 G=5530	300 μ	λ_c=5893				
390									Hdy		
380											
380											
328										SEEING GOING POOR	
315											
340											
375											
356											

285
pg

Date Feb 26/27-93 Observers Hdy/Flx

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
CC12435	BD+18 2307	095612	175327	014931					410s	445
36	"			015640					"	330
37	"			020349					"	415
38	"			021058					"	420
39	"			021807					"	279
40	"			022516					"	443
41	"			023224					"	420
42	"			023933					"	350
43	Bias (a)									
44	Comp							Fe/Ar Clear	60s	
45	Flat							Fund D=½	10s	
46	BD+18 2307	095612	175327	025118					410s	350
47	"			025827						337
48	"			030536						305
49	"			031245						350

Spectr. Temp. ..... Dome Temp./Hum. 10.0°C/73% Transparency Conditions ..... Cloud 286

Focus ..... 6.88 ..... (0143)

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
345				CASS CCD	1800 G=5530	300 μ	λc=5893		Hdy.		
330											
315											
320											
279											
313											
320											
350											
									Hdy	Some Clouds low s w	
350											
337											
305											
330											

P7 207

Date . Feb. 26/27-93 Observers . Hdy./Fbr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc12450	BD+182307	095612	175327	031954					410s
51	"			032703					"
52	"			033412					"
53	"			034120					"
54	BIAS (4)								
55	COMP							R/Sr Clr	60s
56	FLAT							TUNA N-1/2	
57	BIAS (4)								
58	COMP							Fe/Sr Clr.	60s
[illegible]	[illegible]							[illegible]	
59	HD87901	100303	1227						86s
60	HD87901	"	"	c4 0858					105s
61	COMP							Fe/Sr Clr	60s
62-64	FLAT x3							TUNA N-1/2	10s
65	DARK (600s)								
66	BIAS (4)								

Spectr. Ten
Focus.....
Spectr. Ten

Exp. Mtr
330
360
330
305
ook
ook

Spectr. Temp. ..... Dome Temp./Hum. -10.3°C/71.8% Transparency Conditions ..... Clear ..... 2200..

Focus ....6.88..... (0250)

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
330				CCD	1200 G=5530	300 μ					
360											
330										SEEING GETTING WORSE	
305											
60K				(TELESCOPE REVERSED)					TELLURIC	AIRMASS = 1.995	
80K									TELLURIC		
										CAN'T FIND	
										BD+182307 w/ TELE.	
										REVERSED....	

284
#1

Date FEB27/28-93 Observers ... Hdy./Fbr

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC12467-8	FOCUS TEST								
69	BIAS (4)								
70	COMP							FLAT CCW	60s
71	HD87901	10 05 03	+12 27	18 44 27					300s
72	"	"	"	18 50 24					178
73	COMP							FLAT CCW	60s
74-76	FLAT x 3							TUNG A=½	14s
77	BIAS (4)								
78	COMP							FLAT B&W	60s
79	FLAT ~~HD197433~~	~~203836~~	~~+7514~~					TUNG A=½	11s
80	HD197433	20 38 36	+75 14	~~19~~ 23 07					40s
				~~19~~ 30 08					"
				~~19~~ 37 09					"
				19 44 09					
				19 51 09					
				19 58 10					

Spectr. Ten
Focus .....
Spectr. Ten

Exp. Mtr.
56K
56K
1100
234
340
300
330
194

Spectr. Temp. ..... Dome Temp./Hum. -5.3°C / 58.2% (1842) Transparency Conditions .... PARTLY CLOUDY 240

Focus .....6.88.....

Spectr. Temp. ..... Dome Temp./Hum. .....

$T_{CCD} = -100.3$ 480 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 G=5536	250 μ	λ_c = 5543				
36K									TELLURIC	AIRMASS = 3.35	
36K										AIRMASS = 3.12	
										12.5K MAX	
~~[illegible]~~		V 23 - 368	GS V K7 V							ONE EXPOSURE HD147433 LOST!	
1100											
1234											
1340											
1300											
1330											
1294											

2a1
#2

Date FEB 27/28, 1993 Observers Hay/Fbr

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
12486	HD 197433			20 05 10					400s
87	"			20 12 11					"
88	BIAS (4)								
89	COMP								
12490	FLAT								
1	HD 197433	$20^h 38.^m 6$	$+75° 14'$	20 24 54					400s
2	"			20 31 55					"
3	"			20 38 55					"
4	"			20 45 55					"
5	"			20 52 56					"
6	"			20 59 57					"
7	"			21 06 57					"
8	"			21 13 58					"
9	"			21 20 59					"
12500	BIAS								
1	COMP								
2	FLAT								

Spectr. Temp
Focus.....
Spectr. Tem

Exp Mtr
1180
945
6742
762
711
720
739
758
950
890
840
720

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... CIRRUS ... 2½2

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1180										A BIT TRAILED	
895										some cirrus	
6742											
										11496 APH	
762											
711											
720											
789											
758											
850											
890											
840											
720											
[illegible]											

#3 293

Date FEB 27/28, 1993 Observers Hay/Flor

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
12503	HD 197433			21 32 32					400s
4	"			21 39 33					"
5	"			21 46 33					"
6	"			21 53 34					"
7	"			22 00 35					"
8	"			22 07 35					"
9	"			22 14 36					"
12510	"			22 21 36					"
1	BIAS(4)								
2	COMP								
3	FLAT								15
4	FLAT REVERSE								13
5	COMP								
6	HD 197433			22 42 47					490s
7	"			22 49 48					"
8	"			22 56 48					"

Spectr. Tem
Focus
Spectr. Tem

Exp. Mtr
763
740
773
725
677
682
639
635
490
728
695

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 2+4

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
763											
790											
773											
725											
677											
682											
639											
635											
										14550 ADH	
900											
828											
825											

295
#4

Date FB 27/28, 193 Observers Hdy/Fbr

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
12519	HD197433	$20^h 38^m 6$	$+75^\circ 14''$	230349					40Ds	800
12520	"			231049					"	782
1	"			231750					"	735
2	"			~~231250~~					"	870
3	"			233151					"	735
4	"			233852					"	889
5	BIAS(4)									
6	COMP									
7	FLAT									
8	HD 197433			234956					40Ds	864
9	"			235657						887
30	"			000357						890
1	"			001057						920
2	"			001758						920
3	"			002459						935
4	"			003159						935

Spectr. Temp. ..... Dome Temp./Hum. -7.7 / 69.2% Transparency Conditions CIRRUS WAVES 296

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800											
782											
835											
870											
735											
889											
854											
887											
890											
920											
960										CAN'T STAND THE	
975										EXCITEMENT....	
975											

297
#5

Date ..Feb 27/28 - 93.... Observers ....Hdy / Fbr.....

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
12535	HD 197433			003900					
36	"			004601					
37	Bias								
38	Comp								
39	Flat							n=1½	12s
12540	HD 197433			005746					40s
1	"			010447					/
2	"			011147					/
3	"			01 18 48					/
4	"			01 25 49					/
5	"								/
6	"			01 39 50					/
7	"			01 46 50					/
8	"			015351					
9	BIAS								
12550	COMP								60s
	FLAT								

Spectr. Tem
Focus.....
Spectr. Tem

Exp. Mtr.
1936
1940
1990
1996
1995
1968
1940
1902
1949
1950
1960

Spectr. Temp. ..... Dome Temp./Hum. -7.9°C/69.1% Transparency Conditions Some Cirrus 298.
(0040)

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1036											
1140											
1090											
1236											
1295											
1468											
1490											
1502											
1498											
1550											
860											

229
p#6

Date FEB 27/28, 1993 Observers Hdy/Fbr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
12552	HD197433			020508					400s	1965
3	"			021208						2120
4	"			021909						2209
5	"			022609						2223
6	"			023310						2315
7	"			024010						2324
8	"			~~022554~~						2330
9	"			025411						2490
60	"			030112						2300
61	Bias									
62	Comp									
63	Iris									
4	HD197433			031159						1920
5				031900						1870
6				2600						2146
7				~~33~~01						1025

Spectr. Temp. ..... Dome Temp./Hum. -8.0./64.5% Transparency Conditions ... CLEAR 300

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1965											
2120											
2209											
2223											
2315											
2324											
2330											
2490											
2300											
2320											
2270											
2146											
2025											

391
DP7

Date Feb 27/28-93 Observers Hely/Fla

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
12568	HD 197433			03 40 02					
9	"			03 47 02					
12570	"			03 54 03					
1	"			040103					
2	"			04 08 04					
3	BIAS (4)								
4	COMP								
5	FLAT								
6	COMP								
~~4~~	~~FLAT~~								
7	HD 177724								
8	HD 177724			04 36 50					195s
9	COMP								60s
12580-82	FLAT x3								
83	BIAS (4).								

Spectr. Ten
Focus .....
Spectr. Ten

Exp Mtr.
2102
1779
1870
1780
1706
29100
32500

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... CIRRUS? A:T.T. 302

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -9.0 / 62.9%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2102											
1999											
1890											
1780										Poetry... poetry - poetry -)	
1706											
25100										X=2.10 6307	
32500										x=2.03 8364	

Delta Pegasi 4xx2.4

303

Emulsion Batches:

Date .FEB 28/MARCH 1 '93 Observers .....Fbc.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
12584	Bias (4)								
5	Comp							FeSr Clear	60s
6	HD39801	05 49 45	07 23	20 15 13					143s
7	Comp							FeSr Clear	60s
	HD39801	05 49 45	07 23	20 21 13	(LOST! 386 CRASH!)				260s

Spectr. Temp. ..... Dome Temp./Hum. -4.7°C / 61.4% Transparency Conditions .... Cloudy - Thick in 3rd Places
(2020)

Focus ..... 6.88 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 a = 6055	250 μ	λ_c = 6600				
7800		V = 0.80	m2Iab							Thirteen Clouds Airmass: 1.26 24 27 peaks	
8500	3" (?)	V = 080	m2Iab							Poor Seeing - Clouds.	
										386 DOWN! NOTHING TO PERSEUS + WORK	

P1 306

Emulsion Batches:

Date ..Mar.3/3..93.... Observers ...Par./Bla.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc12588	Bias (4)									
89-90	Focus Test									
91	~~HD39801~~ Comp	05 49 45	07 23					FeAr Cu	30 s	
92	HD 39801	05 49 45	07 23	222337	HARTMAN MASK & STELLAR POSN				36 s	28K
93	Comp							FeAr Cu	60s	
94	HD 39801	05 49 45	07 23	222824					41s	36K
95	Comp									
96-98	Flat x 3							Tonga A = 1/2	12s	
99	~~Bias~~ Comp									
cc12600	HD 77327	08 56 48	+47 33 08	225334						15K
1	Comp							FeAr Cu	60s	
2	Bias (4)									
3	Comp							FeAr Cu	60s	
4	HD 79158	09 07 16	+43 37 48	231013					35½	0K
5	Comp									

Spectr. Temp. ..... Dome Temp./Hum. 0.0°C/79% Transparency Conditions ..... Cirrus ..... 306.

Focus ..... 0.685 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Normalized on HR3275

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 ω=6055	250 μ	λ_c=6600				
		v 0.8	m2 I-b							Airmass= 1.630	
28 K		↓	↓								
										Mask Still In....	
36 K										A little Wind	
15 K		v 3.6	A1 I_a						Telluric	Airmass = 1.0022	
10 K	~2"	v 5.32	B8 III p						Bl a	max = 6K.	

307
pt

Date ...Mar. 2/3 - 93.... Observers ..Fbr./Bla.....

Emulsion Batches:
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.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
12606 CCH~~2606~~	HD 79158	09 07 16	43 37 48	23 19 55					487s
07	Comp								
08	Comp								
09	HD 93521	10 42 42	38 06	23 36 16					1538
10	Comp								
11	Bias (4)								
1X2612 - 1X2620	Flat x 9								

Spectr. Tem
Focus .....
Spectr. Tem

Exp Mtr.
15K
10K

Spectr. Temp. ..... Dome Temp./Hum. 10.04/79.8% Transparency Conditions ..... Cirrus ..... 308.

Focus ..... 0.685 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
15 K	3-4"			cass cc O.	1000 u: 6055	250 μ	λ_c = 6600		Bln		
10 K		V 6.9	09.5V						Bln.	Dope Seeing	

309SAT-SUN pg 1

Date March 6/7 93 Observers HIW / TN

Emulsion Batches: .....

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CS386 Time = 9 secs ahead of WWV Time?

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC12621 22	Focus Comp/Stellar posns			19 26		00 48E	+45°	FeNe clear	10/20
23	Bias (4)								
24	Comp							FeNe Clear	20s
25	AC+82 1111	05 49 05	82 06 21	19:44:41	20:44:40	1:18 W	+82 06 18		3599
26	Comp							FeNe Clear	20s
27	Comp							"	"
alt. weather 28	LHS 1176	00 55 11	60 49 52	20:58:42	21:58:48	7:40 W	+61 20 18		3605
29	Comp							FeNe Clear	20s
30	Comp							"	"
31	AC+71 532	00 55 26	71 08 49	22:09:32		8:40	+71 38 57		2999
32	Comp							FeN Clear	20s
33	rewrite of LHS 1176 →	Compare with CC12628.							
34	Bias (4)								
35	Comp							FeNe Clear	20s
36	HD 62509	07 39 12	28 16 00	23:11:25					16s
37	Comp							FeNe Clear	20s

Spectr. Temp. ..... Dome Temp./Hum. 0°C ..... 75% Transparency Conditions ... Clearing ..... 310.

Focus ... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

FANS on By 18:30

CCDT → −100° by 1840

90CGAin 480 0 50 1024 4 1 CCDFAST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1240	Set G92 T= 0°C			CASS CCD	1800 l/mm G4990 3 window	310μ	5140Å	3ci 4ci	Focus	Stellor U 31 Real 736 745 xplot	
								1ci	Tel Normalized on HR		
20s								2ci		(no noise) Very Fine	
3m1	780	2.3"	V= 10.5	M2	Tel East Side			6ci	H/w pgm	Δα = −0 1 7 .2 KGK Δδ = +0 0 36 Photons Some cloud Slight AG	
20s								7ci			
								8ci			
3m05	809	2"-1"	V= 10.8	M2	Tel East Side of piers			9ci	H/w pgm	Δα −0 0 44 Hazy Δδ −0 0 33	
20s								10ci			
								11ci			
29m	1027		V= 10.06	dM4e				12ci	H/w pgm		
20s								13ci			
								9ci	H/w pgm	Headers corrected BEFORE this REQUIRITE	
								1ci			
30s								14ci			
16s	3960		V= 1.14	K0III b				15ci	Std Vel	East side of pier	
20s								16ci			

31 pg 2

Date March 6/7 93 Observers HIW/TN

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
38	Comp							FeNe clear	20s
39	HD62509	07 39 12	28 16 00	23:21:56					15s
40	Comp							"	20s
41	Comp *							"	20s
42	AC+79 3888	11 41 34	79 14 22	23:37:24		0:26 E	+78 40 12		3600s
43	Comp							FeNe clear	20s
44	Comp							"	"
45	HD103095	11 47 13	+38 26 10	00:48:17					320
46	Comp								
FM00480 FTS 2	HD103095	"	"					"N" mode	
47	Comp							FeNe clear	20s
48	HD238090	~~12 07 24~~	~~+55 09 00~~	01 16 41		0:37W			3000
49	Comp			02 08 33				FeNe clear	20s
50	Bias (4)								
51	Comp for next star AC+ ~~76~~ 5308							FeNe clear	20s

Spectr. Temp. ..... Dome Temp./Hum. -4.2°C / 77.1% Transparency Conditions ..... Clear - 5' hazy ... 312

Focus ... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.3°C / 74%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCCD	1800 l/mm G=4990	310μ	5140Å	17ci			
6211		V= 1.14	K0IIIb					18ci	Std Vel.	West Side of Pier now	
								19ci			
		~~MMM~~						20ci			
716		M4	10.9					21ci	H/w Pgm	* The STARS w of interest not M sp type. probably	
								22ci	H/w Field OK, but wrong star indicated Fuck you, Jim.		
								23ci			
2000		V= 6.45	G8 ~~V~~					~~24ci~~	Std. Vel		
								24ci			
55×55 pixels	3"	V 6.45	G8V	Int 2×133ms+2×67ms		310m above etching			Arne	SW, 5 km/hr West breeze	
								25ci		↳ ~56 Signal to noise	
1503	3-4"	V= 9.5	M2					~~26ci~~	H/w pgm	H/w field OK but Δ Dec off Δ Dec = -00 05 20	
								27ci			
										very non noisy bias as all are tonight and ~~over~~ past month	
								~~28ci~~			

313 pg 3

Date Mar 6/7 93 Observers Hlw/Tn

Emulsion Batches:

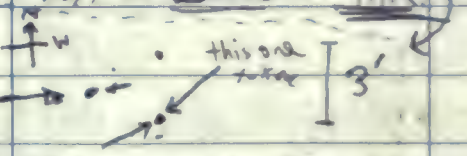
Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
edit 52	AC+76 5308 (not)	15 43.2	76 20	02:25:32		1:33 E	+75:57:06		3611
53	Comp BIAS(4) = CC12654							FeNe	20 comp
CC12655	Comp							"	
56	AC+76 5308	15 43.2	76 20	03 40 56		0 16 E			3601
57	Comp							FeNe	20 s
58	Comp							"	"
59	AC+62 26749	17 34 30	61 45 00	04:53:04		01 30E	+61 41 45		1800
60	Comp							FeNe Clear	20s
61	BIAS(4) CCD warming up T@ 0525 = -57 °C								
62 63	Focus Comp/Stellar								
64	FLAT	CCDT now Stable @ -100.5°C				00 50E	+41°	TungA Clear	6s
65	"							"	6
66	"							"	6
67	BIAS(4)								
	All to Perseus & Worm								

Spectr. Temp. ..... Dome Temp./Hum. -05.2 / 73.9% Transparency Conditions ..... Clear .....

Focus ....6.97.....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCD T = -100.5 @ 02 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
467	2"-3"	V= 11.6	M4	CASS CCD	@ 4990	310μ	cλ = 5140Å	28c	H/W Pgm	easy guiding with the Int = 220ms WRONG STAR!	
								29c			
								30c			
416		V= 11.6	M4					31c	H/W Pgm	Δα = -0000.09 Δδ = -00 00 30 (need M spectrum as well)	
								32			
								~~33~~			
830	3"	V= 9.95	M II					34	H/W Pgm	* working OK CCDT -60°C	
								33c:			
Topup complete By 05:40								1c.			
-6.2°C, Set 6.97								2c 4c:		Stellar shift Blue 4 pixels	
								5c:		MAX IK 10c	
								6c:		"	
								7c:		"	

315 pg #1 Thur / Fri

Date 1993 MAR 11/12 Observers KK, T.A./F.B.

Emulsion Batches: .....

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CSS 386 Time 7 secs behind W.W.V. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE05651	Hartmann IN								10
5652	OUT								10
5653	Hartmann - IN								10
5654	OUT								10
5655	Hartmann inboard			1921		0250W	+23°	ThAr	4/4
5656	" outboard							"	"
5657	BIAS(4)	Dome T=-7.9C		195030					
5658	Comp								
5659	HD 34029	05 0418	+45 54	195558					153s
5660	Comp							—	
5661	HD 34029			200110					157s
5662	Comp								
63	HD 34029			200815		0159W	(Comp = CE 5664)		405
→ 65 66	FLATS x3	At HD 34029 posn		201855					6 sec
68	BIAS(4)	AT HD 34029 posn							

Spectr. Temp. ..... Dome Temp./Hum. -5.5°C 57% Transparency Conditions 3/6

Focus .235 @ 1930

Spectr. Temp. ..... Dome Temp./Hum. -9.2°C 67.5% CLAMBDA 90 CGAIN CCDT → -100°C

Exp. Mtr.	Seeing	~~Pig.~~ Mag. ✓	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				18.00	.3985	60μ=.277set				T = −1.6 F=.240	+.13
				0 0 128 1024		8 1	CCD FMT FOR Focus				
							(5155Å	4th ORDER NO complete ORDER		T = −1.6 F=.230	−.64
							5200Å	5th complete ORDER - FROM TOP.		set to .235	
				18.08	.3990	60μ=.277 400μ=.225					
				18.08	.3990		0 0	OBSERVING FMT 256 1024 41 CCD FMT		T = −46°C F=.235	
										Outboard ≈ −.4 pixels	
								3c;			
No exp meter Tonight.		✓ 0.08	G6 II					4	KK pgm	MAX = ~~MAX~~ ADU/pixel (The hot pixel method)	
								5			
								6		General MAX ≈ 3800 ADU	
								7			
								4c.		8300 ADU generic max ignoring hot pixel saturation	
FLATS	ce05665-5667				W= H=	60μ 600μ		2c;			
								1c;			

317 p942 Thurs/Fri

Date 1993 MAR 11/12 Observers [KK] Fbr LTh

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05669 5671	FLATS x3	at Polaris	posn			~0600W	+88°	Tung	4sec
5672	Comp	"	"					ThAr	6sec
5673	HD8890	01 22 36	+88 46	20 4755					500s
5674	Comp							ThAr	6sec
75	HD8890	01 22 36	+88 46	20 5941					500s
76	Comp							ThAr	6sec
77	HD8890			21 1043					504s
78	Comp							ThAr	6sec
79	Bias(4)								
80	Comp							ThAr	6sec
81	HD62509	07 39.7	+28 16	21 3109		W			63s
82	Comp							ThAr	6sec
83	Comp							"	"
84	HD3712	06 37 48	+55 59	21 5500		W			
85	Comp							ThAr	6sec

Spectr. Temp. ..... Dome Temp./Hum. -9.5°C 56:27 Transparency Conditions ... Sl. hazy ..... 318.

Focus .. 1235 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt (Echelle)	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	18.08 W H	60w = .277 60m = .205 60w 400m = .225		Xgrating 2c; echel	.3990	10K ADU MAX	
								3c;			
		2.0	F5-8Ib				5200Å	4c;	KK pgm	General MAX = 2300 ADU.	
								5c;			
								6c;	KK pgm		
									KK pgm		
								7c;			
								1c;		Dew T = -10.0°C	
								3c;			
	poor	V 1.14	KOIIIb					2c;	Std vel	8K MAX generally	
								3c;			
		V 2.23	KOIIIa					4c;	Std vel	1800 ADU max	
								5c;			

319
Pg #3

Emulsion Batches:
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Date 1993 MAR 11/12 Observers [KH] Fbr./Tg.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce 05686	Comp							ThAr	6s
87	HD8890	01 22 36	+88 46	221341					674
88	Comp							ThAr	6s
89	HD 8890	01 22 36	+88 46	222727					820
90	Comp							ThAr	6s
91	HD 8890	01 22 36	+88 46	224351					
92	Comp							ThA	6s
93	BIAS (4)								
94	Comp							ThAr	6sec
95	HD 84441	09 40 12	+24 14	23 0822					966
96	Comp							ThAr	6sec
97	Comp							"	"
98	HD20902	03 17 12	+49 30	23 4107					1079
99	Comp							ThAr	6sec
05700	Comp								

Spectr. Temp. ..... Dome Temp./Hum. -10.6°C 36%RH Transparency Conditions ... sl hazy 320

Focus ... 235 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD		W 60u H 400u	5200Å	6i			
	6"	2.0	FS-8Ib						kk pgm	3k ADU general MAX	
										CCDT = -102.0°C	
										Dome T = -10.8°C	
	3"	3.1	GOI-II - GOII-G5Ib					2ci	Std vel c MK STD for Cygnus?	2300 max ADU	
								3ci			
								3ci			
	4"-10"	1.79	F5Ib					4ci	~~into~~ α Per's for kk	4200 MAX	
								5ci			

321
pg#4

Date 93 - MAR 11/12 Observers [KKJ] Fhr./Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CEO 5701	HD99028	11 18 42	11 05	00 00 32					600s
2	Comp							ThAr	6s
3	HD99028	11 18 42	11 05	00 18 57					900
4	Comp							ThAr	6s
5	HD 99028			00 36 05					904
6	Comp							ThAr	6s
7	BIAS (4)								
8	Comp							ThAr	6s
9	HD8890	01 22 36	+88 46	01 01 28					780
10	Comp							ThAr	6s
11	Comp			01 27 21				ThAr	6s
12	HD8890			01 28 06					779
13	Comp							ThAr	6s
14	HD8890			01 43 37					783
15	Comp							ThAr	6s
16	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. -12.2°C / 54.7% Transparency Conditions ..... HAZY 322

Focus ..... 0.235 .....

Spectr. Temp. ..... Dome Temp./Hum. -12.8° 50.0%H

CLAMBDA

Exp. Mtr.	Seeing	Pkg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				ECHELLE CCD	18.08	60μ W 400μ H	5200Å		KK pgm	X gr. key = 0.3990	
		~~KW~~	F2 V								
									KK pgm		
		3.93									
								6c;	KK pgm	1100 ADU max	
								7c;			
								1c;		Dome T = -12.7°C	
								3c;			
	3"	2.0	F5-8 V					4c;	KK pgm	5500 ADU max	
								5c;			
								·			
								6c;	KK pgm		
								5c;			
								7c;	KK pgm		
								3c;			

323
pg #5

Date 93 - MAR 11/12 Observers EKK3/Fbr/Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ec05717	Comp							ThAr	6s
18	HD124897	14 11 66	1942	021117					35s
19	Comp							ThAr	6s
20	HD124897	141106	1942	021443					
21	Comp							ThAr	6s
22 24	FLATS x 3					00 54W	+26°	THAR	4s
25	BIAS(4)								
26	Comp							ThAr	6s
27	HD8890	01 22 36	+88 46	034720		E			590
28	Comp							ThAr	6s
29	HD8890			035925		11 20E			685
30	Comp							ThAr	6s
31	HD8890			041304					666
32	Comp							ThAr	
33-35	FLATS x 3					1105E	+8919	THAR	4se
36	Bias(4)								

Spectr. Temp. ..... Dome Temp./Hum. -13.4°C 50% H Transparency Conditions ... Slightly ... 3/4 ..

Focus ..... 0:235 .....

Spectr. Temp. ..... Dome Temp./Hum. -14.2°C 50%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Schulte CCD	600 l/mm .3990	60μ 40μ	5200Å				
									α - Boo std vel		
								4ci	α Boo std vel		
						60μ 600μ		6ci		CCOT = -100.3°C	
				Topup finished @ 03 EST						Dome T = -13.5°C	
	Poor	20	F5-8 Ib					7ci	K K pgm	Tel Far East	
								5ci			
								3ci			
								7ci		6000 mAx ADU	
								5ci			
								3ci			
								1c.			

325
pg #1

Fri - SAT

Date ..9.3-M/A2.12/13.... Observers ..EKK3/.Fbr./.Tn.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceo5737	BIAS(4)								
38	Comp							ThAr	65
39	HD34029	050918	45 54	193259					209s
40	Comp							ThAr	65
41	HD34029	050918	45 54	194034					209s
42	Comp							ThAr	6s
43	HD34029	050918	4554	194818					197s
44	Comp							ThAr	6s
45	HD34029	050918	4554	195609					171
46	Comp							ThAr	6s
47-49	Flat x 3							ThAr	6s
50	Comp							ThAr	6s
51	HD62509	073912	2816	201448					538
52	Comp	073912	2816					ThAr	6s
53	HD62509	073912	2816	202626					500

Spectr. Temp. ..... Dome Temp./Hum. -8.0°C 67.8%H Transparency Conditions ... Hazy Clouds ... 326

Focus ... 225 ...

Spectr. Temp. ..... Dome Temp./Hum. ..... ℄ LiHumBDA

Topup complete by 18:30
90 CGAIN CCDT - 100°C

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	31.6 l/mm 19.12		5180Å			Xg rating = .3793	
65										5200 ADU MAX	
20 65 71	Variable POOR								Cass CCD	Tel OBSCURED by Dome	
65								4c.			
20 65 3263								5c;		MAX ≃ 7K	
65								4c;			
195 1660								6c;		MAX ≃ 12K ADU	
165								7c;			
171 4500											
65											
65						"800 μ" H					
65											
1521 4000		1.14	Kosh						Std Vel	A Few Clouds	
65	~4"									Dim is VERY UNSTABLE	
65 2900	~4"								Std Vel	Seeing Very Poor	

327
pg 2

Date 93-Mar 12/13 Observers EKK3 Tn/Fbr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05754	comp							Tn Ar	6s
55	Bias (4)								
56	Comp							TnAr	6s
57	HD 84441	09 40 12	24 14	20 45 16					832
58	Comp							TnAr	6s
59-61	Flat x 3					01 10E	+23 46		
62	Comp							TnAr	6s
63	HD34029	05 09 18	45 54	21 24 25		03 16W			164s
64	Comp								
65	HD34029	05 09 18	45 54	21 29 17					M7
66	Comp							TnAr	6s
67	HD34029	05 09 18	45 54	21 33 10					
68	Comp							TnAr	6s
69	Bias (4)								

Spectr. Temp. ..... Dome Temp./Hum. -8.9°C/69.1% Transparency Conditions ..... Photo Cirrus ..... 308..
(2028)

Focus .... 0.225 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Rig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
6s				Echell CCD	600l/mm 19.12	60u 600u H	5180A			Xgrating = 0.3993	
6s											
832 2110	4"-6"	3.1	G0II-~~G5~~Ib					6ci	Stellar Sp	mk STD	
6s					~~[illegible]~~						
						60u 800u Height		6ci			
6s				Echelle 17.66	xgrating .4003	60u width 600u Height	5158A		echelles xgrating settings changed		
164 3000		0.08	G6III	[MADE note in Dec 13/92 page on xgrating set]			5158A		to Dec 13/92 settings.	5th comp to be ORDERED FIRST OP	
M7 3K.									HK pgm		
6s											
3000		0.08	G6III						Capella	NICE SPECTRA!	
6s											
										Dome T = -9.0°C	

329 pg #3

Date 93-MAR-12/13 Observers E.K.K3. Tn/Tor

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ee05770	Comp								
71	HD 62509	07 39 12	28 16	21 43 03		01 08W			273
72	Comp.								
73	HD 62509	07 39 12	28 16	21 50 07					194.
74	Comp							ThAr	6s
75	Comp							ThAr	6s
76	HD 84441	09 40 12	24 14	22 01 15		00 22E			985
77	Comp							ThAr	6s
78	HD 84441	09 40 12	24 14	22 19 58					950
79	Comp							ThAr	6s
80	Bias(4)								
81	Comp							ThAr	6s
82	HD 47105	06 31 56	+16 29	22 49 53		03 30W			702
83	Comp							ThAr	6s
→ 84 88	FLATS x 5	At Capella posn ~ 2130 EST				03 35W	+46°	TUNG	11s

Spectr. Temp. ..... Dome Temp./Hum. -9.4°C 72% Transparency Conditions ..... Thin Cirrus 570

Focus ..... 0.2.2.5 .....

Spectr. Temp. ..... Dome Temp./Hum. -9.6°C 72.3%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. 17.66 f/l	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm .4003	60u 400u	5158			X grating = 0.4003	
3300	1-2"		KO III b						std vel	Thin Cirrus	
2500											
1350	4"	3.1	GO II - G5 Ib					5ci	std vel & 103K STD	5K HOA max	
1300											
								1ci		Dome T = -9.8°C	
								4ci			
1270	3"	1.93	A I III s					5ci	1ck pgm	4K typical MAX	
							5158	7ci			
						60u width 600u height		2ci			

331 pg#4

Date 1993 MAR 12/13 .... Observers [T.K]..Th/F.Hr.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE05789	BIHS(4)					03 49	+16 31		
90	INBOARD HURTMAN					"	"	Th Hr	4 1/2
91	OUTBOARD					"	"	"	4

Spectr. Temp. ..... Dome Temp./Hum. -9.7°C 72.3% Transparency Conditions Cloudy 332
storm coming fast

Focus 1.225

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. 17.66 f/11	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600l/mm CROSS			1Ci			
4/4	Set 1.225		T=-9.7°C		.4003	60μ W 600μ H	5154Å	1Ci ~~2Ci~~	Focus Test	OUT BOARD. 5 pixels Red	
4								2Ci	"		

233 pg#L Sun-mon

Emulsion Batches:

Date 1993 MAR 14/15 Observers [illegible] Tn

CSS 386 Time only 3 secs behind WWV Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CE05792 93	inboard/outboard Hartmann					≈00 00	+75°	ThAr	4/4 sec	
94	BIAS(4)					00 27E	75 44			
95 99	FLATS x5	Tel west side				00 22E	+75 44		5sec	
CE05800	Comp							ThAr	6 sec	
01	HD 8890	01 22 36	+88 46	19 48 47		05 01W	+89 14 48		545s	1500
02	Comp							ThAr	6 sec	
03	HD8890			20 00 40					534s	1535
04	Comp							ThAr	6sec	
05	HD 8890			20 13 17		05 26W			562s	1547
06	Comp							ThAr	6sec	
07	Comp			20 31 36				"	6sec	2530
08	HD 34029	05 09 18	+45 54	20 32 45					163s	3530
09	Comp							ThAr	6sec	
10	HD 34079			20 41 42					153s	3520
11	Comp							ThAr	6 sec	

Spectr. Temp. ..... Dome Temp./Hum. -10.5°C 46% Transparency Conditions .. FINE 334

Focus ... ~~1000~~ .225 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CCD T → -100°C

Exp. Mtr.	Seeing	Mag.	Sp.	Inst. 18.0 & 1.4	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600 lines/mm .3990 tilt	60u 600u	5200Å	out board SI Red in 3 pixel		T -105°C and dropping fast	
Note RNG not quite duplicate of MAR11/12. Lower ORDER should have been brought fully in										Dome T = -110°C	
						60u 600u Height		3ci		MAX 10K ADU/pixel	
						60u 400u		4ci		Tel normalized on HR2289	
500	4"	20	F5-8V			"		5ci	KK pgm	Δα = -00 18 50 GRAM Δδ = +00 01 42 MAX	
								6ci		6K typical MAX for comps	
1685	3"							7ci	KK pgm		
								2ci			
1587								3cf	KK pgm	SI moved? rel to others	
								4ci			
~~3530~~								6ci		⇒ 10K max generally	
3530		20	G6 III					7ci	KK pgm		
								2ci			
3520								7ci			
								2cd			

335 pg #2

Date 1993 MAR 14/15. Observers [illegible] Jn ... some HW

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05812	HD34029	05 0918	+45 54	20 4629		0249W			142s
13	Comp			5329				ThAr	6s
14	BIAS (4)								
15	Comp							ThAr	6sec
16	HD62509	07 3912	+28 1600	21 0017					194s
17	Comp							ThAr	6sec
18	HD62509			21 0628					282
19	Comp							ThAr	6sec
20	Comp							"	6sec
21	HD47105	06 3156	+16 2900	21 1942		0206W			638
22	Comp							ThAr	6secs
23	HD47105			21 3221					750
24	Comp							ThAr	6sec
25	BIAS (4)					0223W	+16		
26	Comp for Procyon, next star			21 5142				ThAr	6sec

Spectr. Temp. ..... Dome Temp./Hum. -13.0°C 50% Transparency Conditions ... Sl hazy ... 336.

Focus ... 1.225 ... Warm Room Humidity = 32% ∴ Kettle run a bit

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3581				echelle CCD	600 l/mm .3990	60u 400u	5700Å	7c;	kk pgm	* possible sat'n on Lower ORDER (incomplete ORDER that is)	
								1c;		CCDT = -103.0°C	
								2c;		MAX = 7400 ADU Spectra	
1800		1.14	KO III b					3c;	std vel	MAX = 8500 ADU	
								4c;			
1932	3"							5c;	std vel	9700 ADU max	
								6c;			
								7c;			
2061	3.5"	1.93	A1 IV s					7c;	kk pgm		
								4c;			
2060								7c;			
								2c;			
								1c;			
								2c;			

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Date 1993 MAR 14/15 Observers [illegible] Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CE05827	HD 61421 Procyon	07 34 09	+05 29 00	21 53 03		01 31 W			233	3-11
28	Comp							ThAr	6sec	
29	HD61421			21 59 19					248	3000
30	Comp							ThAr	6sec	
31	Comp							"	6sec	
32	HD8890	01 22 36	+88 46 00	22 16 33		07 27W			441	1738
33	Comp							ThAr	6sec	
34	HD8890			22 25 47					444	1736
35	Comp							ThAr	6sec	
36	HD8890			22 36 08					557	1720
37	Comp							ThAr	6sec	
38	BIAS (4)			22 47 44		07 52W	+89 14			
39	Comp			22 56 52				ThAr	6s	
40	HD84441	09 40 12	+24 14 00	22 58 59		00 47 W			1209	1627
41	Comp							ThAr	6s	

Spectr. Temp. ..... Dome Temp./Hum. -13.7°C 60%* Transparency Conditions . Sl. hazy sl. some cloud. 330

Focus . . 1.2.7.5. .....

Spectr. Temp. ..... Dome Temp./Hum. -14.0°C . . 66% Note BIAS(4)s are a bit noisy tonight, as I think they were recent nights too.

Exp. Mtr.	Seeing	Avg. Mag.	Sp.	Inst. 18.0s	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3011		0.34	F5 IV	echelle CCD	600 .3990	60μ 40μ	5200Å	3ci	Std for kk	18 K ADU max generally	
								4ci			
3000								5ci		* Heater Relay clicked during exp	
								6ci		7540 MAX ADU	
								6ci		7060 MAX ADU	
1738	<3"	2.0	F5-8 Ib					7ci	kk pgm	CCDT = -100.5°	
								2ci			
1736								3ci		"	
								4ci			
1720	3-4"							7ci		"	
								2ci			
								5ci	Std.		
1627	2-4"	3.1	GOII-G5 Ib					6ci	Std vel c mk	Std	
								2ci			

339 pg #4

Date 1993 MAR 14/15 Observers [illegible] Tn

Emulsion Batches:

16

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce05842	HD84441	09 40 12	+27 14	23 20 54		01 08 W			
43	comp							ThAr	6sec
44 ce05848	FLATS x5			23 47		00 00	+40°	TUNG	5sec
ce05849	BIAS(4)								

Spectr. Temp
Focus ...17
Spectr. Temp

Exp Mtr.	S
57½	

Spectr. Temp. ..... Dome Temp./Hum. -14.1°C 66% Transparency Conditions Slhazy 340.
cloud coming anyway

Focus ...225.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Dg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1575		3:1			600 .3990	60μ 400μ .225	5200Å	3c:	Stdvel ε	mtn stds CCDT=-100.6°	
								4c:			
						60μ = .277 600μ = .205		5c:		CCDT = -100.3° MAX 12K	
								1c:		Pond T = -14.3°	

5:2

5:2

341 Tues - wed - Thurs
19#1

Emulsion Batches:
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Date 1993 MAR 17/18 Observers [KK] Tn

CS386 Clock slow, "Behind" wwv by 2 secs. OK.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ceos850	BIAS(4)			1909		04 15W	+89°		
51 53	FLATS x 3			1911		04 25	"	TUNG	5sec
54	Comp							ThAr	6sec
55	HD8890	01 22 36	+88 46	192144		04 50W			900
56	Comp							ThAr	6sec
57	HD8890			193909					845
58	Comp edit terminal?							ThAr	6sec
59	HD8890			195522					850
60	Comp							ThAr	6sec
61	Comp							"	"
62	HD34029	05 09 18	+45 54	201812					300
63	comp							ThAr	6s
64	HD34029			202327					291
65	Comp							ThAr	6s
66	HD34029			203211					
67	comp							ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. −9.4°C 46% Transparency Conditions .. FINE ..... 342.

Focus .....0.225.... Prob. OK. Unchanged. SHME cold wave as previous nights. gusty NW wind

Spectr. Temp. ..... Dome Temp./Hum. −11.8°C 51% Topup done by 18 45 90 CG4in CCDT → −100°C

Exp. Mtr.	Seeing	Rig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD 1848	600 l/mm .3496	60μ 600μ	5200Å	1c;		Temp = −10.2°C Tel NORMALIZED on HR 2289	ogwin
						"	"	3c;		max 13k ADU/pixel	
						60μ width 400μ height		4c;			
950	poor	2.0	F5-G1b					5c;	kk pgm	3.2k MAX ADU @ 580-600 rows	
								6c;			
1030								7c;	kk pgm	34k MAX ADU	
								2c;			
1040								3c;	kk pgm		
								4c;			
								4c;			
3350	poor	0.08	G6III					2c;	kk pgm	MAX 10k ADU	
								4c;		8k max for comps	
3350								2c;	kk pgm		
								6c;			
3347								2c;	kk pgm		
								4c;			

343
Pg #2

Emulsion Batches:

Date 1993 MAR 17/18 Observers [KK] TG

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
C00 5868	BIHS(4)			20 38		2 48W	+46°		
69	Comp							ThAr	6s
70	HD62509	07 39 12	+28 16 00	20 44 51		00 32 W			454
71	Comp							ThAr	6s
72	HD62509			20 55 19					306
73	Comp							ThAr	6s
74	Comp							"	"
75	HD8890	01 22 36	+88 46	21 13 49					664
76	Comp							ThAr	6s
77	HD8890			21 27 49					679
78	Comp							ThAr	6s
79	HD8890			21 41 11		07 06 5W			600s
80	Comp							ThAr	6s
81	Comp							"	6s
82	HD84441	09 40 12	+24 14 00	22 01 25					1242
83	Comp							ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. -11.7°C 51% Transparency Conditions FINE 344.

Focus .1225.....

Spectr. Temp. ..... Dome Temp./Hum. -12.0°C 53%

Exp. Mtr.	Seeing	Dig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelleccd 18-08 1:14	600l/mm X .3990	60μ 400μ H	5200Å	1c;			
6s								4c;		MAX ~~79~~ K ADU	
454	1460	·	1·94	KO III b				5c;	std vel	6·1K max	
6s								6c;		~~6·8~~K 7·94K max	
3.6	1480							5c;	std vel		
6s								6c;		CCDT = -101.0°C	
"								6c;	6·4K H&K max	Real Time Video Focus TV quick Comeau	
664	1454	4-6"	2.00	F5-8 Ib				7c;	KK pgm	~~6.4K H&K max~~ 26.K max ADU	
6s		~~4-6"~~						4c;			
677	1428							7c;	KK pgm		
6s								4c;			
600	1447	3"						3c;		sl Left of 7c; ?	
6s								4c;			
6s								4c;			
1452	1275	1-3"	3·1	G0 II-III 5 Ib				2c.	std vel & KK std	20K ADU Σ 2 avg 100's above background	
6s								6c;		∴ 280/1 S/N	

345 pg #3

Date 1993 MAR 17/18 Observers [HMS] Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ce05884	BIAS(4)					00 06W	+23 47		
85	HD84441	09 40 12	+24 14	22 26 42		00 25W			1147
86	Comp							ThAr	6s
87	Comp							"	"
88	HD61421	07 34 04	+05 29	22 51 35					230
89	Comp							ThAr	6s
90	HD61421			22 57 39					749
91	Comp							ThAr	6s
92	Comp							"	"
93	HD95128	10 53 54	+40 58 00	23 07 42		00 19W			2720
94	Comp							ThAr	6s
95	HD95128			23 55 26		00 52W			1800
96	Comp							ThAr	6s
97	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. -11.9°C ... 53.5% H Transparency Conditions 5/. hazy 346

Focus ... 1225 .....

Spectr. Temp. ..... Dome Temp./Hum. -13.4°C 55.5% H

Exp. Mtr.	Seeing	Fil. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD 1868 tilt	600 l/mm 13990 set	60μ 400μ	5700Å	1ci			
1147 1260	3"	3.1	GOII-G5Ib					2ci	Std vels	mtk Std	
65								4ci			
1								4ci			
330 3000		0.34	FSIV					5ci	Std check for kk	7K max	
65								6ci			
39 3000								5ci			
65								4ci			
11								4ci			
352 520	2"-3"-4"	5.05	GOV					2ci	Mn pgm	(Tom Meyer) 28K photons above background 10 cts.	
65								6ci		~100/1 (17/1 S/N)	
1500 306	2-"8"							3ci	Mn pgm	seeing going to pot	
65 300								4ci			
								1ci		Looks clean Better than others recently.	

347 pg #4

Date 1993 MAR 17/18... Observers [SAJ MMc] JT.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
ce05898	Comp							ThAr	6sec	
99	HD 8890	01 22 36	+88 46	00 36 47		10 00W			491	1239
5900	Comp							ThAr	6sec	
01	HD 8890			00 4620					465	1238
02	Comp							ThAr	6sec	
03	HD 8890			00 5600		10 20W			484	1200
04	Comp							ThAr	6sec	
→ 05 09	FLATS x5							TUNG	5 sec	
ce05910	BIAS(4)									

Spectr. Tem
Focus.....
Spectr. Tem

Spectr. Temp. ..... Dome Temp./Hum. -13.5°C ... 56% Transparency Conditions ... Hazy ... 348.

Focus ... .225 ...

Spectr. Temp. ..... Dome Temp./Hum. -14.2°C 56.5% CLAMBDA

Exp. Mtr.	Seeing	Pkg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
6sec							5200Å	4ci		CCDT = -100.3°C	
1309	2"-4"	2.0	F5-8Lb	Edelle 1808	600 .3990	60µ 400µ = .225		7ci	Hi pym		
6sec								6ci			
1278								5ci			
6sec								4ci		Local Time	
1200								3ci	Hh pym		
6sec								6ci		5.5K max	
5 sec						60µ width 600µ = .205		4ci		135 ADU max	
								1ci		CCDT = -100.3°C	
			OFF To Perseus &			WORK					

349
Thurs-Fri

Date 1993 MAR 18/19 Observers (Hdy) Tn/FDc

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FM00481 AC B	D 67ms HD52860 (+ E F Int x133msec)		06 57 34 +47 55 21	19 30		=0000	+48°	"N" mode	
CC12668 CC12669	Focus Comp / Stellar Autofocus			21 50		0000	+30°		
CC12670	BIAS (4)								
1	COMP			22 05 00				FeAr Clear	60s
2	HD87901	10 03 03	+12 27 22	22 10 18					63s
3	"	"	"	1202					63s
4	COMP			22 14 25				FeAr Clear	60s
5 6 7	FLATS x3							Tung A=1/2	7s
8	BIAS (4)								
9	FLAT							Tung A=1/2	8s
12680	COMP							FeAr Clear	60s
1	BD+18°2307	09 56 11	+17 53 27	22 25 45					410s
2	"			22 32 53					"
3	"			22 40 02					"
4	"			22 47 21					"
5	"			22 54 30					"

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... FINE ... 350...

Focus ... 697 ..... LOG BOOK 72 -8.8C (1812) 64% @ 2115 90C Gain CCDT → -100°C

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Pos. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NO Exp Meter Temp = -8.6C	Fine	6.34	B9Tn	CASS CCD	16° G=600-5	300 μ	λc = 6563		Seeing Test	FINISON BY 18:40 Done NW NCWIND	
						250μ pointer	"	3i/4i	Focus	stellar vi SI Reel (OK)	
								1ci			
								3ci	All with Telescope East Sidereals		
	2"	1.35	B7Tn					4ci	Telluric Std	MAX 14858 KMAX ADU	
								5ci			
								6ci			
								7ci		10K	
								1ci			
								8ci		12557 ADU	
								9ci			
NO EXPOSURE METER		9.4 ~~9.8~~	KOV					10ci	Hdypym		
								10ci			
								10ci			

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Pg. 2

Date . 1993 MAR 18/19 Observers . Hdy/Tn/Fbr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
12686	BD+18 2307	09 56 11	+17 53 27	23 01 39					410 sec
7	"			23 08 48					410s
8	"			23 15 57					410s
cc12689	BIAS(4)			23 23 13					
90	Comp								60 sec
91	FLAT							TUNG A=1/2	8 sec
92	BD+18 2307			23 28 20					
93				23 35 28					
94				23 42 38					
95				23 49 47					
96				23 56 55					
97				00 04 04					
98				00 11 13					
99				00 18 22		01 54W			
cc12700	BIAS(4)								
01	FLAT			00 26				TUNG A=1/2	8 secs

Spectr. Temp. ..... Dome Temp./Hum. -8.8°C ..... 66% H Transparency Conditions ..... Sl. hazy ..... 352.

Focus ... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. -9.9°C ..... 70.3% H

cLAMBDA

Last Topup finished by 21:20

Exp. Mtr.	Seeing	Pkg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No Meter	2"-4"	9.4 - 9.9	KOM	CASS CCD	1800 l/mm G=6035	2"	6563Å		Hdy pgm		
								k:		Dome T = -9.0C	
								11c:			
								12c:		62.8k max	
								13c:	Hdy pgm	Repeat.8 STARHOS.BAT	
								13c:			
								1c:			
								14c:		MAX 4K ADU	

3E3 Proj #3 cont....

Date 1993 MAR 18/19..... Observers . Hdy/Tu/Fbr.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc12702	Comp			00 2739				FeAr Clear	60sec
03	BD+18 2307	09 5611	+175327	00 3035		02 05W			40s
04				3742					"
05				4451					"
06				5200					"
07				00 59 09					"
08				01 0618					"
09				01 1327					"
cc12710				01 2036					"
11	BIAS(4)			01 38					
12	Comp			01 2904				FeAr Comp	60s
13	FLAT							TUNG A=1/2	7 sec
14	BD+18 2307			01 3430					40s
15	"			01 4139					"
16	"			01 4848					"
17	"			01 5557					"

Spectr. Temp. ..... Dome Temp./Hum. -10.0°C ... 72% Transparency Conditions ... s! hazy ..... 35.4..

Focus ... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. -9.8°C ... 73.1%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	1800 G=6035	250u	6563Å	15c;			
	2"	9.4 -9.9	KO V					16c;	Hdy pgm	Repeat STAR440S.BAT ×8	
"											
"											
"											
"											
"											
"											
"											
								1c;		Dome T = -100°C	
								17c;			
								18c;			
								19c;	Hdy pgm		
"											
"											
"											

355

Emulsion Batches:

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Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp